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Military Miniatures IN REVIEW

The Cat is out of the bag!

Tamiya's Leopard 2A5 has got it goin' on baby!

MMiR: making the world a better place for geeks of all nations!

DML's big schnoz T-34

Getting Mobel with the Wagon: the next Tamiya Panzer IV AA tank

DREAM MACHINE: Special Air Service Jeep

Flak 'n FAMO, part 1: converting the Tamiya kit

Radical 8-rads: part 1 of a multi-part series

Commie Pop-Gun: ICM's teeny 76mm

Picture Perfect Panzer: the latest German "funny" from On-Track Models

Deaux FT-17, Monsieur: a pair of First World War tanks

Out Fuched: Revell's modern German 6x6

Eight is Enough: modern German 8-rad

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No. 23

SHORT TAKES • MINI-MEN • MODEL CITIZEN

MILITARY
Miniatures
★ ★ ★ ★ ★ ★ IN REVIEW ★ ★ ★ ★ ★ ★

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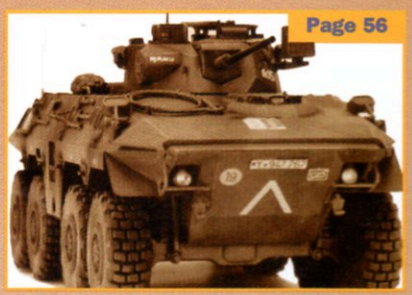
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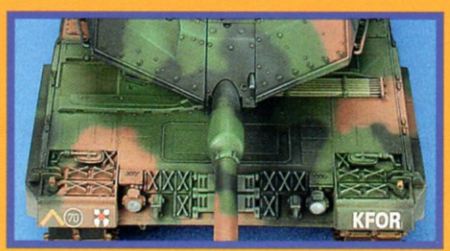
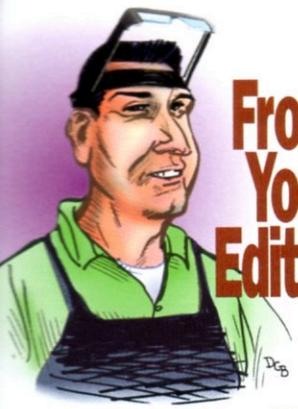
ON THE COVER:

Tamiya's latest styrene work of art is a modern MBT and a German one at that. It might not be everyone's cup of tea, but it is definitely not a kit to be missed. Plus, think of the all the cool Bundeswehr stuff we now have to go along with it! Could this be the next modeling trend? Look for the full review beginning on page 51.





From Your Editor

Boy, there's lots of stuff going on around here. We have been busy, busy, busy. If you haven't heard already, we are taking over subscriptions to MMiR from RZM. If you are unfamiliar with this arrangement, let me refresh your memory (go ahead and have a seat). RZM is a wholesale and retail military bookseller located in Connecticut, USA. They represent several well-established military book and magazine lines such as After the Battle, Steel Masters, Wheels & Tracks and Armour Modelling. Way back when, when we were super-teeny, we arranged to have RZM take over the administration of our subscriptions due to a number of reasons. First and foremost was time. We had almost no staff to produce the mag, much less to talk on the phone and deal with customers. Not that we don't love talking to our customers, but it's just that there wasn't enough time in the day to do that and produce a magazine. And since RZM already administered subscriptions for all the above publications, they seemed like a natural to administer ours. Another reason was the seductive magic of credit cards. RZM was already set-up to take all the major credit cards and this made significantly easier for people to sign up to MMiR.

↑ Artist's interpretation

And so ever since issue 8, RZM has handled the above matters. Ampersand still determined pricing and other matters, but RZM basically did the dirty work.

OK, fast forward to issue 22. Ampersand Publishing has grown quite a bit since RZM began taking subscriptions, so we thought it was high time that we brought that service back home. We have added additional staff, just for this purpose, as well as expanded our computer system to add state-of-the-art ordering and billing capabilities. We also now accept credit cards, MasterCard and VISA to start, with several other popular cards being added in the coming months (of course, we still take checks, too).

So here's how this works. U.S. subscriptions are $35.00, while a Canadian one is $45.00. Mexico runs $53.00 and overseas subs are a whopping $72.00 (airmail only). All these prices are the same as they were with RZM. We strongly suggest that overseas customers contact their respective agents for a better deal on their subscriptions. Experience has shown that airmail is the only truly reliable service from the U.S., which is why that price is so hefty. Subscriptions run by issue, in that they begin with you first and end with your fourth. For additional information on rates and a sample subscription form, see our ad on page 73.

All U.S. subscriptions are shipped second class bulk rate, which is darn near as fast as first class. In fact, in many situations second class is shipped right along with the first class mail. We have found this method to be the fastest and most reliable way to get the magazine into the hands of the readers. Like RZM, we will not offer a first class subscription due to the speed of the second class process. As an alternative to the first class option, we will offer a standing order subscription, where your issue is shipped to you automatically each time it is released and charged to your credit card. There is no break in the price for this and you will still pay whatever fast shipping rate applies. If this interests you, give us a call.

For some time now, subscription issues have been shipped out of Florida to save time and this will continue. The subscription issues head to the mail 3 or 4 days prior to the release of the dealer issues. The dealer issues must still snake their way into the hobby shops after that and, due to this fact, all the magazines pretty much make it to their final destinations at the same time. Of course, the mail and UPS don't always work exactly the same way in every part of the country, so sometimes issues will reach hobby shops a day or two before they reach your mailbox. If this is consistently the case, we do recommend that your hobby shop become your source. Remember we want happy customers. We don't mind where you get it, as long as you're satisfied.

If you subscribed to MMiR prior to issue 22, your subscription will continue to be administered by RZM. Check with them on address changes or other delivery related matters. They will continue to service their existing subs until they expire. And when they do, new subs will be taken by Ampersand.

Anyone re-upping, 22 and after, will be (and is already) processed through Ampersand. We have sent out a few letters to folks who had submitted checks to RZM and asked that they return a new check made out to us. Ditto on credit card orders, where your statement will now show Ampersand, rather than RZM.

About the only thing extra we're asking is that phone order customers send back a completed subscription form (we'll still process your order and activate your subscription on the spot). This form will be included with your paid invoice. The reason for this is that the USPS requires that we keep a written record of every subscriber in order to comply with bulk rate permit regulations. Since we've only recently started (again), we have zero paperwork on file. Thanks in advance for this, we known it's kind of a pain.

Oh—and for your convenience, all Ampersand products will now be available directly to all our subscribers.

And speaking of, Allied-Axis #2 should be out by the time you read this. We have quite a bit of additional material planned and an outline of this can be found in our "Cool New Stuff" ad on page 80. Of course, we are always interested in input from our readers. Due to the sheer volume of material that we possess, it's a good chance we can accommodate you. In order to conserve space, there is no reader's forum in Allied-Axis, but I will field any and all mail right here.

Also look for the "Movers and Haulers..." title soon. This book on engineering and recovery vehicles is right behind AA#2 and it's turning out pretty good. The book contains 13 modeling articles in an expanded format that includes full coverage of the model and shots of the real thing, too.

OK, that's it for me!

—Pat Stansell

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Come over here
AND SAY THAT

Now laughs at strollers
TONY BONITATIBUS

Back in the world
BRIAN KEOUGH

Military Miniatures in Review, Volume 6 Issue 2, 2000.

MILITARY MINIATURES IN REVIEW is published quarterly by Ampersand Publishing Company, Inc. 235 N.E. 6th Avenue, Suite G, Delray Beach, Florida 33483. **Tel: (561) 266-9686 Fax: (561) 266-9786**. E-mail: **mmir35701@aol.com**. Application to mail at periodicals postage rates is pending at Delray Beach, Florida and at additional mailing offices.

SUBSCRIPTION RATES: U.S.; $35.00 for 4 quarterly issues, Canada; $45.00, Mexico; $53.00. Individual issues; $9.95. Foreign post offices please inquire for rates.

For information and rates in Hong Kong and the Far East contact: Falcon Supplies Co., Unit 203, Chit Lee Commercial Building, 30 Shaukiwan Road, Hong Kong Tel: 8862290 Fax: 8863001.

For information and rates in the UK and Europe contact: Historex Agents, Wellington House, 157 Snargate Street, Dover, KENT CT17 9BZ Tel: 01304 206720 Fax: 01304 204528 E-mail: sales@historex-agents.demon.co.uk

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Military Miniatures in Review will only return material if return postage is included with submission. MILITARY MINIATURES IN REVIEW is not responsible for damage which occurs in the mailing process.

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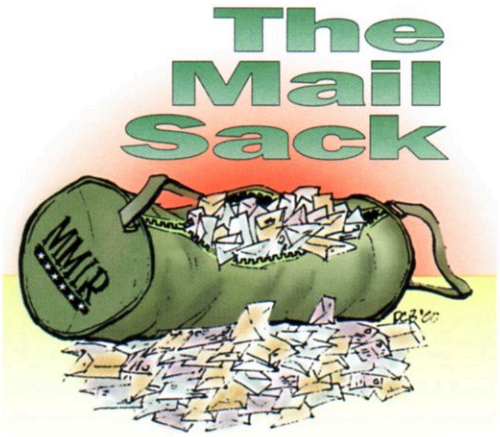
Created and printed in the U.S.A.

Ampersand Publishing COMPANY, INC.

The Mail Sack



Haggling with Hank

In issue No. 21, Hank Johnson, wrote about the "know it all's" being wrong about the white stars on Shermans being good aiming points. Well, I offer a picture of a M4A3E8 that I took at Ft. Knox (in the rain). It was several hundred yards away and I was using a zoom lens. See the attachment; the Sherman is on the right. The star does stand out.

Additionally, I have a cover from YANK magazine that shows a close up of a Sherman turret with the star TAPED over. I don't think they would do that unless the crew was concerned about the visibility. I leave it to everyone to draw their own conclusion.

—David A. Kimbrell

Mr. Kimbrell's photo was not clear enough to print, but it does show that the star is visible at considerable distance. The essential thrust of Mr. Johnson's comments (if we may be so bold) was that all good tankers (and all good soldiers, in general) are taught to shoot at the center mass of target, regardless of what happens to be painted there, stars, billboards, whatever. The purpose of this technique was to foster the very important and basic military concept of NOT MISSING. This holds true no matter what you are shooting, or what you are shooting AT. The fact that U.S. tankers PERCEIVED that the stars were contributing factors didn't stop German tank and anti-tank gunners from doing what they had been taught well (AND NOT MISSING). There is substantial photographic and documentary evidence that this continued long after the practice of taping or painting over the stars commenced.

WHAT'S WITH ALL THE CAPTIAL LETTERS? WE'RE NOT SURE, BUT WE'LL STOP NOW.

The truly last word (no, really)

Your comments about Allied vs. Axis armor over the past two issues were right on in my opinion. I've argued until I had a migraine with many people that big HEAVY tanks don't make the best tanks. I once said to someone that we, the U.S. and allied nations, did not have the time to build the "perfect" tank. We had scout tanks; M-3 & M-5, MBT's; the whole Sherman series and late in the war developed infantry support vehicles: M-24 Chaffee & tank destroyers; M-10, M-18, M-36 et al...

I don't know what else to tell self-described experts, but I usually end any debate with "the Allies won the war, stupid." I know logistic problems plagued the Germans late in the war, but that was only one facet. The bottom line is that most people think that 200 good tanks versus 20 exceptional tanks is not a fair fight. That sums up the Sherman versus Tiger argument for me.

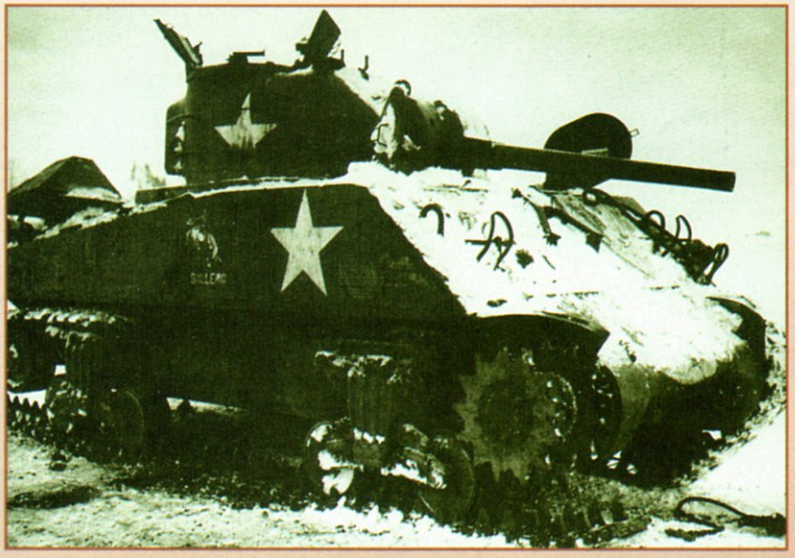
Take it easy and keep putting out an awesome armor only magazine!

—dad_dog_32701@yahoo.com

This will finally put the "who had the best tank" argument to rest. At least for now...

The law of averages

My letter in #22: Oh my gosh! It's pretty scary that mine was one of the "more coherent" responses. Maybe you just liked the swearing.



Even I'm full of shit sometimes, so here's a correction. Major General Geiger commanded the Marine III Amphibious Corps at Okinawa, which was part of the 10th Army commanded by Army General Simon B. Buckner. After General Buckner's death on 18 June 45, Major General Geiger assumed command of the 10th Army (not 10th Corps as I stated in my letter). He was the first Marine officer to command a field army. The Army brass came unglued with a Marine in command and sent General Joseph Stillwell to take over 10th Army.

FYI my background: 1st Sgt. in the Marine Corps Reserve and veteran of Desert Storm coming up on 20 years service. I'm manager of a hardware store in real life. Occasionally full of shit, but no more than the average guy!

—Ed Keene

Dear J.

Dear J. Morgan, I am an "out of the box modeler." I am glad someone else feels the same way I do.

Well said in your "Mail Sack" letter. I enjoy the whole MMiR format and give credit to the magazine for getting me back into the hobby. I usually add an intake screen here, an updated tool set there, and some link-to-link tracks to a model. OK, sometimes I go for a turned aluminum barrel. To do any more bogs me down and the hobby becomes too "piddly detailed" for me.

Yet, I rejoice the hobby is healthy and progressive; the opportunities have expanded and the overall quality has risen. Yes, I do marvel at the accuracy and artistry that master modelers are able to create. I get envious sometimes, but I am reminded to keep my family and priorities in perspective. We all have limits to our time and resources. "After all we are not all mechanical engineers who moonlight as unit historians."

—tdavis@familylife.com

Everyone has a different take on their little corner of the hobby universe. Mr. Davis and Mr. Morgan may not be mechanical engineers who moonlight as unit historians, but if they wanted to be it would be OK with us!

Kudos, Corée and other stuff

Congratulations for the great job you do, and your new ideas. Although I would like to see more modern subjects than just the Bengurion... I want to note a couple of things for you:

In your idea bank. Please note that the US. M992A2 is produced as full resin kit by a Greek company named "White Tower Models," with the designation "CPV" (command post vehicle) as it is used by the Hellenic Army.

I recently bought, via Internet order (from hobbyweb.com), Corée's VBL/Panhard. It is an excellent kit but some parts were missing or broken. I tried to contact the company in Korea, but the telephone numbers given in the kit's box were wrong. I contacted hobbyweb

and they told me to return the kit etc., etc. After I saw in your #22 issue that Squadron is the US importer for Corée, I asked for the missing/broken parts from them and they sent them to me in only three days! I want to congratulate them on the excellent customer service they provide.

I am interested in your new "Movers, Haulers, Pushers & Shakers" Guide. When is it gonna be available?

4. Where can I buy a Jaguar models catalog?

—Stavros Soulis

We are glad to hear that Squadron was able to solve your parts problem. This is always a dilemma when purchasing a resin kit, regardless of the source. Squadron Mail Order has been around for a long time and they have a sound reputation for customer service (and tell them we said so!).

"Movers, et al" is being completed for printing as we go to press on this issue and should be available shortly.

As to the Jaguar catalog, the answer to your question can be found in the new product section, under Jaguar (of course).

✉

Looking for the Ladies

I've been on the hunt for 1/35th female figures. I don't think there's a figure line that just does females, but is there any chance you can do a special column on what's available?

—Omar Gonzales

Heh, heh he said: "does." You're right; nobody's doing an all-female line in 1/35th scale (repeat: in 1/35th scale), probably because the demand isn't strong enough. But there are a good variety of females in the existing lines, particularly in Jaguar, Corée, and Verlinden. And thanks for the idea; The Model Citizen in Issue 24 will be a focus piece on 1/35th females.

✉

Looking for Large

I know that large-scale armor and figures (1/9th, 1/16th, etc.) have pretty much disappeared from the pages of MMiR. Have you ever thought of doing a large-scale section in the magazine? A lot of guys, me included, switch back and forth between 1/35th and the big guns. I know Verlinden abandoned the 1/16th WWII line, but now there's Tamiya, plus lots of other high quality resin figures.

—Paul Richardson

We originally stopped the big dudes due to space. There's just so much 1/35th-scale stuff coming out, it didn't seem right to bump something smaller for a big figgie. However, we certainly agree on the Tamiya pieces, so if enough interest is expressed, we'll consider bringing them back as a separate section.

✉

Internetyness

Now that you've installed The Idea Bank, what are the chances of starting a column showing good historical Internet sites? Not manufacturers and shops, but stuff like real tank photos, re-enactor groups, or museums. Could be a cool idea.

—Bill Rhoades

Excellent! We'll give this one some thought, too!

✉

Or so you'd think...

Cool new graphics in Volume 22. Give our best to your new staff artist, Dave Berns. And thanks for finally showing us what you look like.

—Greg McDonald

We can neither confirm nor deny that the image depicted in the Editor's column bears more than a passing resemblance to the editor. Thank you and move along, please.

—Ampersand Security

✉

Got a problem with any of this?

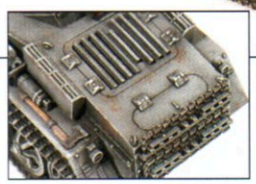
Send those comments to: Mail Sack, Military Miniatures in Review or discuss complaints, problems, wisecracks, etc. via the Internet. Find us at the handle: ***mmir35701@aol.com***

Letters are sometimes edited for brevity, grammar, spelling, national security concerns and other stuff.

We sincerely regret that we rarely, if ever, are able to personally enter into correspondence with our readers.

On Track Model Co.

R&J represents this awesome line of German WWII "Funnies."



OT3507 Panzer I Ausf. C
Complete resin kit with injection-molded individual track links $90.00

It's finally here!

RJ35008
Uhu IR Searchlight conversion for Tamiya's SdKfz 251/D
$44.00

Now available from R&J Products

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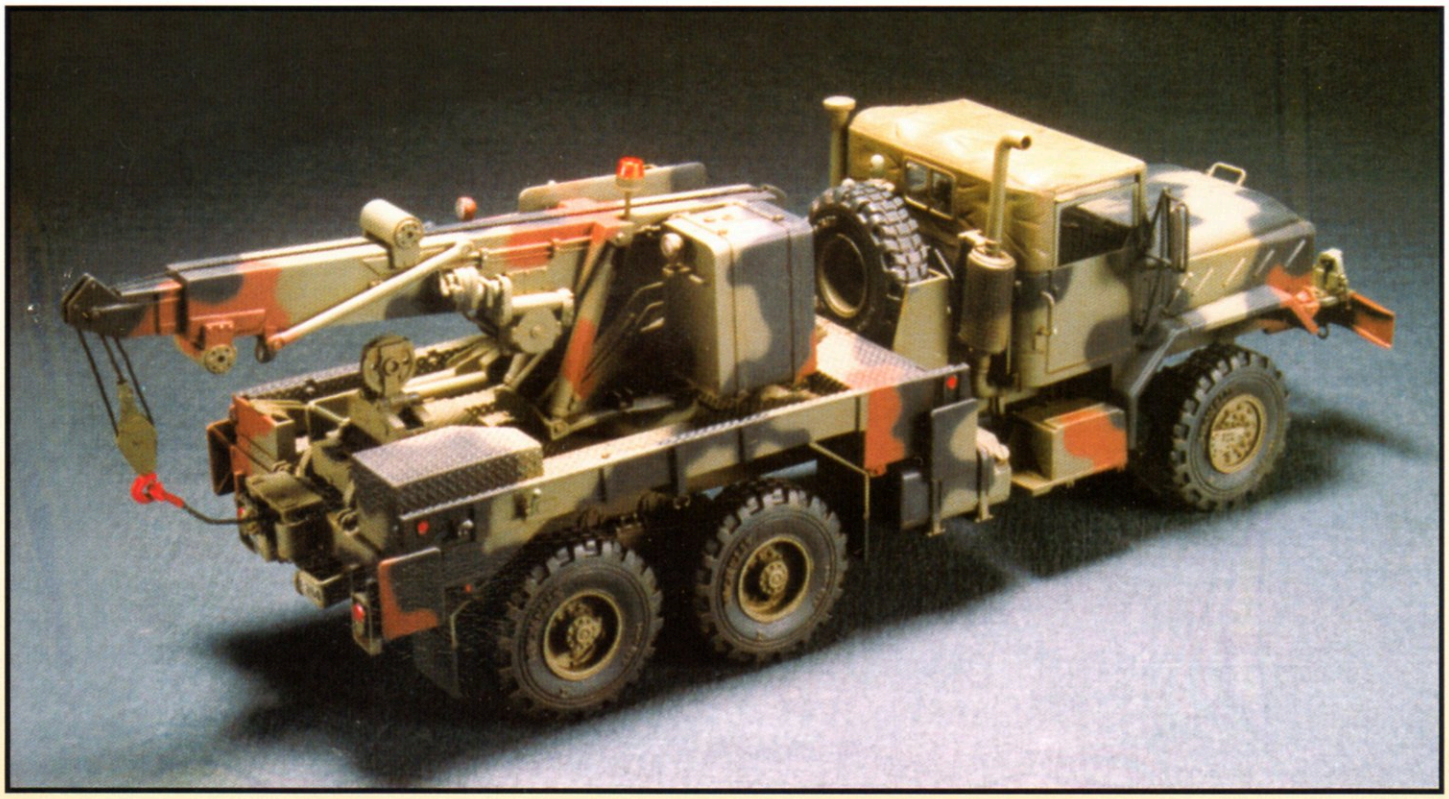
Short Takes

The Year in Preview



Aber

A pair of samples have arrived at the Ampersand Publishing headquarters and we're still trying to recover. 35068 is the **Panzerjager I with 4.7cm Pak (Basic Set)** for the Italeri kit. Two large and one small sheet of etch are included, along with acetate gauges. There are approximately 7 billion parts here, including the ammo racks, screens, muffler guard and even the external arms for the roadwheels. Six whole pages of instructions. Fantastic for $23.99. 35069 is the **Gun Shield for Panzerjager I with 4.7cm Pak (Early Version)** and includes two fantastic etched sheets plus a cast brass gun mount. That's right; cast brass. Also included are the gun shield, fighting compartment and etched radios.

Custom Dioramics

If you've been following the industry for the past few years, you know that Bob Letterman, High Chancellor of VLS, bought Custom Dioramics last year. Well, he's also built a whole brand spankin' new production facility inside VLS, hired a new production crew and got the resin flowing. This new crew has Legends & Lore and Custom Dioramics in full swing, and they're anticipating six to eight new releases a month, in addition to all the older Custom Dioramics products you've come to know and love. As a special treat, we have a sneak peek of the **Refugee Set** that is premiering in September. Take a good look, fellow modeling enthusiasts, 'cuz you've never seen anything like it. Included are six(!) figures, a complete wagon, a horse, a dog and a cargo load of household goods. There's Dad leading the horse and carrying a suitcase; Mom carrying a baby; Gramps; Junior in shorts; and Sissy holding a teddy bear. Junior, Sissy, Mom/baby and even the horse are all one-piece castings. The cargo load locks together in the wagon and consists of three major groupings plus a mirror and a pedestal for the table. There's a dresser, grandfather clock, boxes, bags, suitcases—everything for the family on the go. These folks could be anywhere in Europe over the last several decades, including Kosovo. Part number and retail are still TBA as we go to press, but look for the whole deal at around $60.

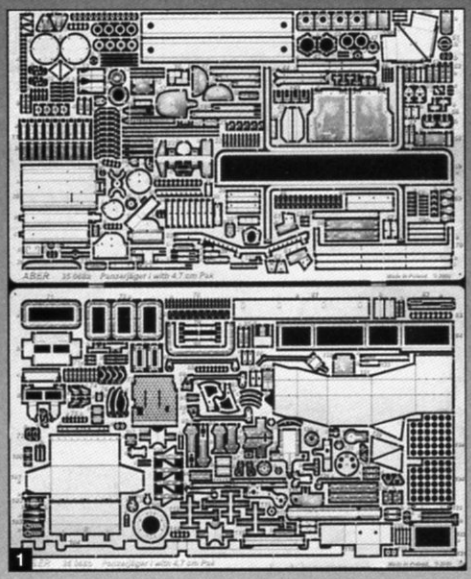
Also available from Custom Dioramics are these all-new releases: 5001, **U.S. Army C Rations (printed sheet)**, $4.95; 5002, **MRE Cartons (printed sheet)**, $4.95; 6001, **Village Well (resin, with roof)**, $10.95; 6002, **Dodge WC-54 Stowage** (11 pieces), $12.95; 6003, **Universal Vehicle Stowage** (11 pieces), $10.95; 6004, **Bedrolls, Tentpacks & Kitbags** (9 pieces); 6005, **Straight Palm Tree Trunk**, $5.95; 6006, **Leaning Palm Tree Trunk**, $5.95; 6007 and **Fan Palm Tree Trunk**, $5.95. If it's palm fronds you want, see the TechStar listing. Pay extra special attention to the three stowage sets; they're all new and meticulously sculpted and you can never have too many bags and packs.

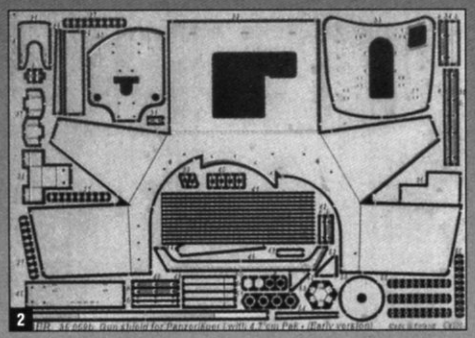
Dragon

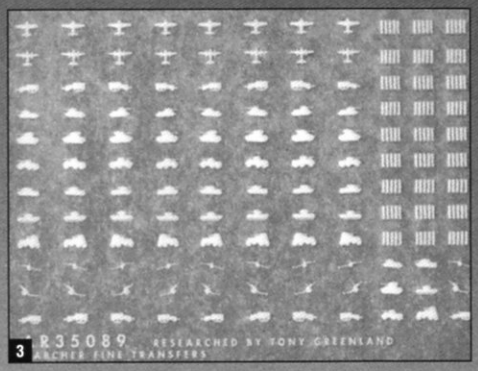
Now on shelves everywhere is 6125, **Sdkfz. 250/3 'GREIF'**, an alte version with the frame radio antenna in Dragon's ongoing armored half-track series. You'll recall that Airfix and Tamiya both released this vehicle in the 70s and it's a good choice for an upgrade. GREIF markings are of course optional and a driver is included along with Rommel, an aide and the scissors periscope from the Kübelwagen kit 9042. Retail is $27.98. Also coming in the Dragon pipeline is 6114, **Sdkfz. 2 Kettenkrad with Puppchen**, $19.98; 6141, **Sdkfz. 250/5 NEU II Beob Pz.Wg.**, $27.98; and 6144, **Commanders Conference Kharkov 1943**, $7.98.

Eduard

The photo-etched supermen of the Czech Republic have once again bedazzled us with the width and depth of their release list. There's always something for everyone. Remember a while back we talked about how cool it would be to have some sort of Post-It Note stencil for armor markings? Something removable, cheap, disposable and flexible? Eduard has answered the call. Their line of Eduard Express Masks premiered last year as a series of thin die-cut self-adhesive vinyl masking sheets for aircraft markings and canopies. Now it's time for armor. These little sets are absolutely bitchin' and make armor markings a breeze. They're perfectly die-cut and easy to use and will rock your world, baby. Here's the list. XT01, **German Crosses WWII Early**, $4.99; XT02, **German Crosses WWII Late**, $4.99; XT03, **US Stars Small**, (4 each of 2 sizes, plus rings) $2.99; XT04, **US Stars Medium**, (3 each of 2 sizes, plus rings) $5.99; XT05, **US Stars Large**, (2 each of 2 sizes, plus rings) $4.99; XT06, **US Stars with Segmented Circle**, (27 total, varying sizes) $4.99;

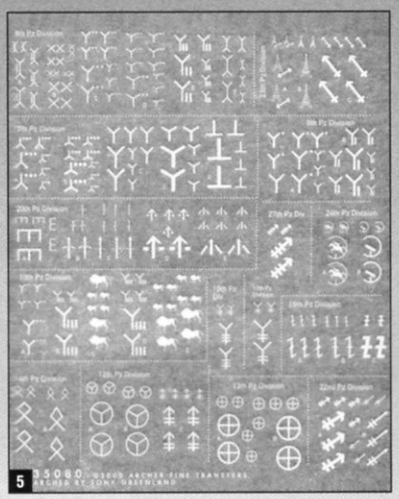


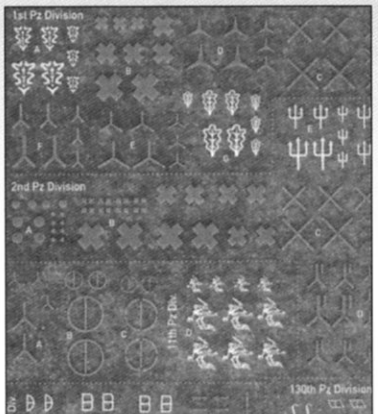




1. Aber's basic set for the Italeri/Zvesda Panzerjäger 1.
2. The second Aber set for the Panzerjäger 1, which includes the shield.
3-7. The following Archer items do not appear in the text of this issue, but we did list them last time. We thought you'd like to see them, as they are pretty darn nice. Number 3 is a set of kill markings for various German guns, while 4 is a new set of printed posters. 5 through 7 are some of the new German tactical markings. 6 is the yellow set, while 5 and 7 are white. Note how the different insignia are arranged.

AR35094
Cut out poster and attach to diorama subject with adhesive. May be moistened, crumpled or burned to simulate weathering.





XT07, **German Numbers Small**, (36 numbers, 1 through 9, plus neat little strips for alignment) $3.99; XT08, **German Numbers Medium**, (ditto) $3.99; XT09, **German Numbers Large**, (ditto again) $4.99; (by the way, those German numbers are turret numbers); XT10, **British Tactical Markings**, TBA; XT11, **Jerry Can Crosses**, TBA; XT12, **IFOR Markings**, TBA; XT13, **SFOR Markings**, TBA; XT14, **UN Markings**, TBA; XT15, **Russian Markings**, TBA; XT16, **Bridge Signs**, TBA; XT17, **KFOR Markings**, $3.99; XT18, **Russian Stars**, (2 each of 4 sizes) $2.99; XT19, **Allied Chevrons**, TBA; XT20, **Kursk Markings**, TBA; XT21, **German Letters Small**, TBA; XT22, **German Letters Medium**, TBA; and XT23, **German Letters Large**, TBA. Each set includes comprehensive instruction sheets. Eduard Express Masks—ask for them by name.

Not that the friendly folks at Eduard are neglecting the etch side of the family. Here's the latest update. 35317, **KV-1 Fenders (Eastern Express)**, $19.99; (all the following retails are TBA)—35318, **BTR-152** (Skif); 35319, **M109A6 Paladin (Italeri)**; 35320, **Sdkfz. 231 6-rad (HPM)**; 35321, StuG IIIG with Express Mask (Dragon); 35322, **Sdkfz. 223 (Tamiya)**; 35323, **Sdkfz 232 8-Rad (Tamiya)**; 35324, **T-80UD (Dragon)**; 35325, **BM-13 Katyusha (Italeri)**; 35326, **PzKpfw. IV Ausf J (Tamiya)**; 35327; **PzKpfw. IV Ausf. H (Italeri)**; 35328, **T-80 (Dragon)**; 35329, **T-72M2 w/ERA (Dragon)**; 35330, **Flakpanzer IV-Kugelblitz (Dragon)**; 35331, **T-34/76 1943 (Italeri)**; 35332, **Challenger Mk.III-(Tamiya)**; 35333, **M1A1 Abrams (Tamiya)**; 35334, **T-64BV (Skif)**; 35335, **T-34/85 (Tamiya)**; 35336, **URAL 4320 (Omega)**; 35337, **Jagdpanther Late (Tamiya)**; 35338, **Leopard IA2 (Italeri)**; and 35339, **M4A1 Sherman (Italeri)**.

Eastern Express

Another new line which has popped up recently out of eastern Europe, these guys are doing it all in Russian. Russian armor, that is. Here's the lowdown. 01, **Soviet Heavy Tank KV-1S**, $28.95; 02, **Soviet Heavy Tank KV-85**, $28.95; 03, **Soviet KV-8S Flamethrower Tank**, $28.95; 04, **Soviet KV-14 SP Gun (SU-152)**, $28.95; 05, **GAZ-66 with AA Gun ZSU 11**, $23.95; and 06, **GAZ-66 UN with Canvas Top**, $19.95.

Elefant Model

These guys from the Czech Republic continue to make a big splash with neat armor stuff for very little green. They've got a release list as long as your arm, but these items are now available through VLS. 35423, **German Tool Brackets, Late (25 pcs.)**, $7.95; 35485, **Barrel Cleaning Rod for King Tiger**, $4.95; 35500, **Barrel Cleaning Rod for Jagdtiger**, $4.95; 35501, **Barrel Cleaning Rod for StuG III A-E/ PzKpfw. III N/PzKpfw. IV A-F1**, $3.95; 35502, **Barrel Cleaning Rod for StuG III F**, $4.95; 35503, **Barrel Cleaning Rod for StuG III F/8, G/PzKpfw. IV F2-J**, $4.95; 35537, **Boltheads No. 3**, $4.95; 35538, **Boltheads No. 4**, $4.95; 35539, **Nuts No. 1**, $4.95; 35540, **Nuts No. 2**, $4.95; 35541, **Nuts No. 3**, $4.95; and 35542, **Nuts No. 4**, $4.95.

Gunze Sangyo

We don't get much news on these guys, but we did spy (and obtain) a new version of the StuG IIIG while in Europe. This is the **Sturmgeschütz 40 Ausf. G (Sd Kfz 142/1)**, kit number G-732:3000. Now the deal is that DML offers most of the old Gunze "high-tech" armor kits in their own boxes with new DML parts replacing the old metal ones. At one time, these made up a substantial portion of the DML "Imperial Series." Gunze has continued to sell these kits in Japan and Europe under their original label with the DML parts inside. So this is what you get here, however, there are some additional parts in the form of the perforated steel return rollers and a few other small items. Also thrown in the box are several custom-made Express Masks from Eduard. Neato.

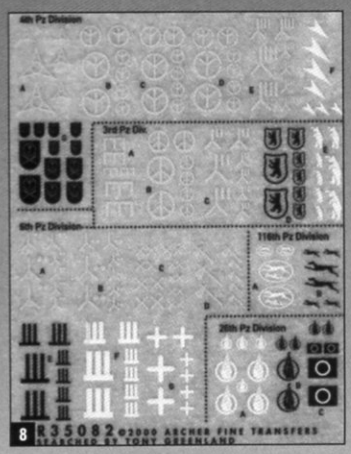
A separate accessory set of figures is also available. This is **German Infantry Set for Sturmgeschütz 40 Ausf. G**, kit number G-2202:3000 (FM2). This set is composed of three SS types riding on the front of the StuG. There is also a companion set (FM1) that is two crew figures and an officer, but we couldn't get our hands on it.

Most likely, the kit will not be available in the U.S., but if you reside in Europe you may want to keep an eye out for it. Gunze figure sets are imported into the U.S. by The Right Stuff Distributors, so they would be your best bet.

Contact them at P.O. Box 2310, Bassett, CA 91746, Tel: (626) 968-1333, fax: (626) 968-1330.

Harper Castings

Harper Castings focuses primarily on the Pacific Theater of World War II and once in while a nice little surprise comes forth. HR T03 brings in their **M3 Burma Lee Conversion** for $34.95. It's an accurate turret plus solid roadwheels, hull stowage boxes, 75mm gun barrel and more. T04 is the **Japanese Ho-Ni III Conversion** at $34.95, with solid resin upper hull, fighting compartment, main gun barrel, recuper-



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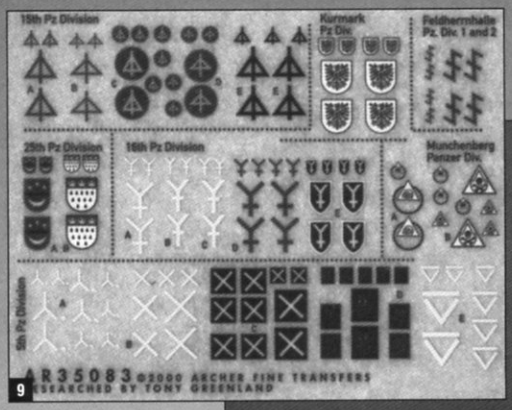

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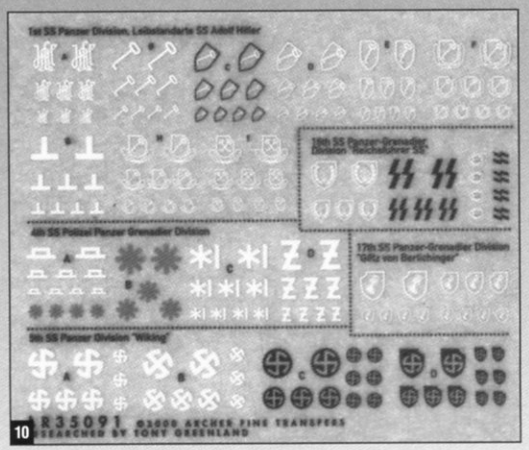
1st SS Panzer Division, Leibstandarte SS Adolf Hitler
4th SS Polizei Panzer Grenadier Division
17th SS Panzer-Grenadier Division "Götz von Berlichingen"
5th SS Panzer Division "Wiking"
R35091 ©2000 ARCHER FINE TRANSFERS
RESEARCHED BY TONY GREENLAND
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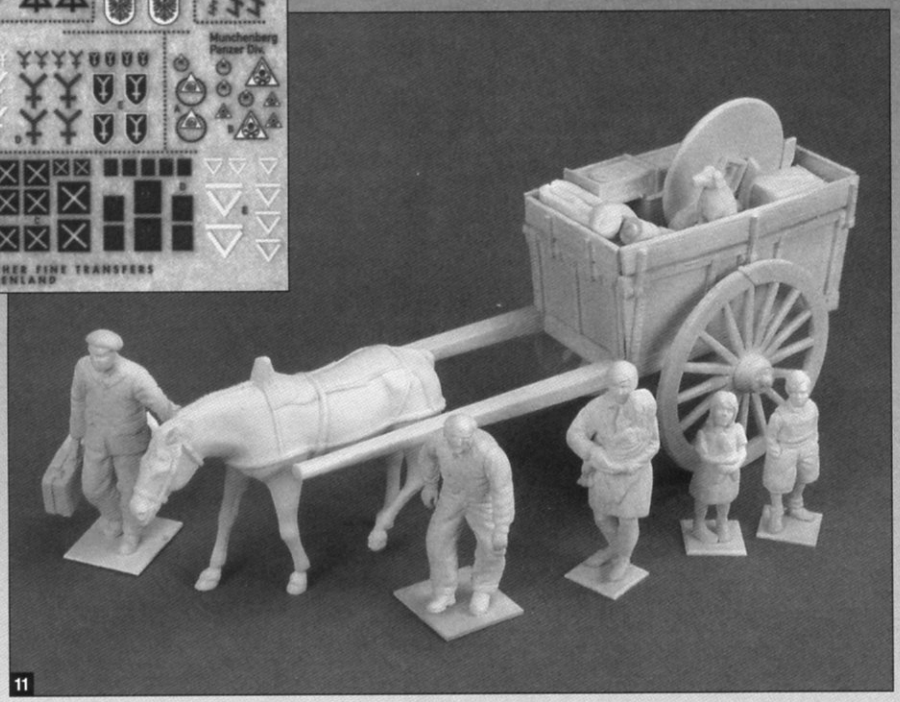
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ator and muzzle brake. T05 is the **M3 Lee Turret** to replace the kit version found in the Tamiya kit. Retail is $12.95 and it should be available by late summer.

Hobby Fan

We finally got our hands on one of the Hobby Fan resin kits. This is the resin arm of AFV Club and they have been doing some pretty ambitious stuff. What we got was HF-012, **M936A2 5t Recovery Vehicle conversion**. This is an extensive conversion for the Italeri 5-ton truck. It includes the boom, deck and tons of other gear to create the wrecker and a super set of Michelin tires (see lead photo).

The quality is really first rate with crisp resin castings that contain little or no flash. Overpours are minimal as well.

The price of the Hobby Fan resin items has always been high and this piece is no exception at $179.98. Availability is much better than it used to be, with several of the major mail order players carrying stock. If you're having a tough time locating one, check with their U.S. agent, The Right Stuff Distributors (address above).

Hornet

Hornet has gone and released a brand new figure, which doesn't happen very often. This is GH28, **WW2 German Officer in panzer uniform**. He is billed as part of "conference group #2" and as such is meant to go along with the last release (reviewed in issue 22).

This dude is also cast in resin and he is from the hand of the maestro himself, Roger "Milliput maniac" Saunders.

Look for him (the figure, not Roger) in the next installment of Mini-Men.

VLS is the exclusive on the Hornet stuff, so check with them for proper pricing and availability.

ICM

ICM has been focusing on a few aircraft and ships lately, but two new figure sets in 1/35 scale are slotted for late summer release. 35132, **Battle for the Dnieper 1943**, features a whole diorama inside, including the PzKpfw. II Ausf. L 'Luchs', German Tank Crew 1943-45, 45mm Anti-Tank Gun and five-man gun crew. That's quite a deal for $36.98. Also look for 35152, **Normandy Campaign 1944**, which includes the Lynx plus eight SS figures. Retail on that one is $29.98.

Jäger

Here's a brand spankin' new line of resin figures from Scotland. We expect great things from them, because they did it right and sent us a whole crate of samples. So many, in fact, that we couldn't even fit them in the Mini-Men section because of the deadline. So, without further ado, here's the whole shootin' match. **12th SS Pz. Div. Hitlerjugend, Prisoners 1944-45** (This series is sculpted slightly smaller in stature to represent the youth of the division): G1, **Wounded, Arm in Jacket**; G2, **With Helmet**; G3, **Wounded (Head)**; G4, **Pz. Jacket**; G5, **NCO. SS Crew 1—seated figures for Steyr, FAMO, etc**: G6, **NCO in Smock**; G7, **MG42 Gunner in Camo**; G8, **Sleeping, in Smock**; G9, **Smock and Italian Trousers**; G10, **Sleeping, in 1944 Camo**; G11, **Sleeping, Leaning**; G12, **Driver in Italian Camo**; G13, **Officer in 1944 Camo**. **Allied Figures:** B1, **British Para Prisoner/Officer**; B2, **British Para Prisoner/Wounded Arm**; B3, **British Para Prisoner/Wounded Head**; A1, **US Late War, Pointing**. **SS Crew 2—Late War Tank/FAMO Riders:** G14, **Standing, Leaning**; G15, **MG42 Gunner Laying on Turret**; G16, **Sitting on Gun Mantlet**; G17, **Sitting on Left Front Hatch**; G18, **Sitting on Right Front Hatch**. Also available is MOD1, **UN British AFV Crew with Body Armour (Bosnia/Kosovo)**.

Both the series of Germans are in sitting and reclining positions for good use in and on your vehicles. Importing rights are still up for grabs as we go to press, so keep your eyes peeled. U.S. retails are all TBA.

Jaguar

One of our all-time cross your fingers wishes has finally been granted. After many years of hoping and wishin', and thinkin', and prayin', and a few months of whimsical teasing by Jaguar, 63535 **Elefant Interior Detail Set** is now reality. Designed for Italeri kit #211, it's Jaguar's most ambitious interior set to date. We're talking floors, sponsons, walls, roof, ammo racks (with ammo, thankyouverymuch), transmission, radios, complete driver's compartment and—wipe your eyes—the complete gun breech. We're a little light headed. Rumors are bouncing around everywhere about a new Elefant, but our longtime love affair with the Italeri kit makes this an absolute must have. Retail is around $49.95.

Also now available is the first-ever **Jaguar catalog** and it's in living color; 16 pages showing the full line of Jaguar products and demonstrating what makes this line so special. Part number will vary from dealer to dealer, so ask for it by name. Retail is about $5.00.

Legend

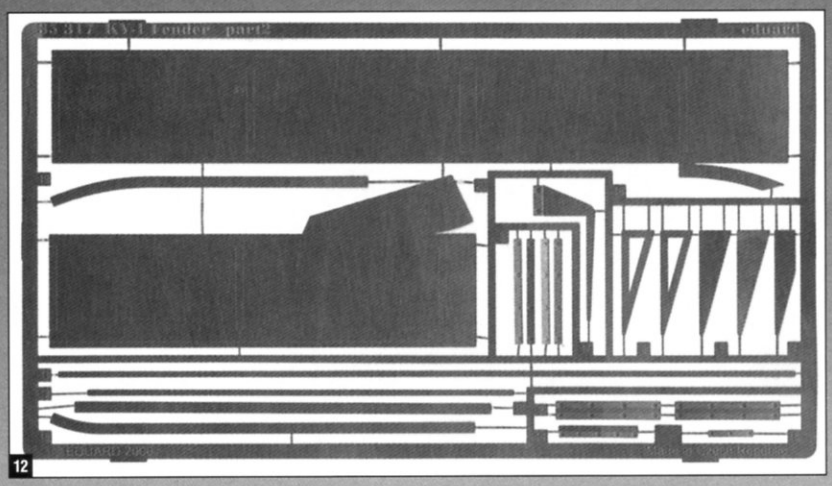
Another new resin line has sprouted up in Korea and you'll recognize a strong similarity to the other two new Korean quality lines, Corée and Dynasty. This is excellent stuff, imported through Squadron Mail Order. The figures come in very small boxes with full color artwork and box art, which will make a lot of retailers happy. Here's the list. LF0002, **German Infantry Winter Clad WWII**, $6.98; LF0005, **Waffen SS Tank Crew #2 WWII**, $6.98; LF0006, **German MP WWII**, $6.98; LF0008, **German Fallschirmjäger WWII**, $6.98; LF0010, **German Motorcycle Rider Set (2)**, $14.98; LF0012, **US Tank Crew #2 WWII**, $6.98; LF0015, **US 101st Airborne w/Indian Head (Mohawk) WWII**, $6.98; LF0017, **US Soldier at Rest #2 Vietnam**, $6.98; LF0018, **USMC M60 Gunner Vietnam**, $6.98; LF0020, **Russian Tank Crew WWII**, $6.98; LF0021, **US 82nd Airborne Officer & German POW WWII**, $28.98; LF0022, **US Soldier in Poncho, Vietnam**, $9.98; LF0023, **Fallschirmjäger 1941**, $9.98; LF0024, **German Infantry at Rest WWII**, $9.98; LF0026, **German Ski Troopers (2 with base)**, $29.98; LF0027, **German Ski Troopers #1 WWII**, $9.98; and LF0028, **German Ski Troopers #2 WWII**, $9.98. LF0026 features the two skiers with the skis integral to the base, or you can buy them individually with the skis cast separately. Samples arrived just as we were going to press, so you'll see them in the flesh in next issue's Mini-Men.

Also now available from Legend is LF1001, **US M151A1 Ford MUTT**, retailing for $39.98. This is a complete resin kit of the modern Jeep and it's a beauty. Included are photo-etched details, acetate windshield, brass rod and a full-color photo instruction sheet that also shows photos of the real thing. We wept openly and unashamedly.

Our samples and information were supplied by Squadron Mail Order.

Model Valley

There's a new kid in town fresh from Korea and



8-10. These are more of the new Archer German transfer sets. These examples are multi-color.
11. The new refugee set from Custom-Dioramics.
12. Eduard's new and complete fender set for the Eastern Express KV series.
13. The new StuG III riders from Gunze Sangyo.
14. Gunze's box top for the late StuG. Most likely NOT available in the U.S.
15. The newest release from Hornet Miniatures.

his name is Model Valley. These guys are producing some terrific resin accessories for U.S. kits and here's what's up: MV0002, **M60A3 Engine Set (for Academy/Tamiya)**, $44.98; MV0003, **M12 Engine Set (for Academy)**, $32.98; MV0004, **M12 Transmission (for Academy)**, $21.98; MV0005, **Gun Truck (for AFV Club)**, $44.98; MV0006, **.50 cal Ammunition Boxes (large, small and open)**, $10.98; MV0007, **XM-134 Mini Gun**, $9.98; and MV0008, **.50 Cal Machine Gun**, $9.98. The Gun Truck is a real work of art, featuring armored doors and windshield cover, reinforced armor sidewalls with interior stowage bins for the cargo bed, a mini gun, spare tires, oodles of ammo boxes, a radio, tons of accessories and even a figure perched on the hood. Whew! This is a spectacular upgrade set and the casting is top notch. Look for lots of great things from Model Valley.

The Right Stuff Distributors supplied our samples and information. See the section on Gunze for their particulars.

MR Modellbau

More yummy resin goodness is heading to our shores from MR in Germany. Here's the latest list. 35103, **Detail Set for Spaehpzr 2 A1/A2 Luchs** Bundeswehr, price TBA; 35121, **Wheels and Detail Set for Opel Blitz S**, $25.95; 35122, **Wheels and Detail Set for Mercedes L3000S (L701 2-hole rim)**, $25.95; 35123, **Wheels and Detail Set for Mercedes L3000S (L701 8-hole rim)**, $25.95; 35124, **Wheels for Sdkfz. 231/232 6-wheel armored car**, $25.95; 35125, **Detail Set for Sdkfz. 231/232 6-wheel armored car**, $27.95; 35126, **M4 Sherman Roadwheels (pressed type with 6 reinforcements)**, $19.95; 35127, **M4 Sherman Roadwheels (flush type)**, $19.95; 35128, **M4 Sherman Roadwheels (5-spoke)**, $19.95; 35129, **M4 Sherman Roadwheels (5-spoke including covers, USMC version)**, $19.95; 35131, **Japanese Light Tank Type 4 Ke-Ne Conversion**, $25.95; 35132, **2-man Wiesel Airborne Tank Crew**, $24.95; 35133, **Wheels and Conversion Set for Sdkfz. 231/232 (Magirus Type)**, $25.95; 35134, **Jack and Tools for PzKpfw. I & II**, $17.95; and 35135, **SFOR Leopard 2A5 Crew**, $19.95. Also coming down the pike is 63, **Flammpanzer B2(f) Char B1 bis Flamethrower Tank,** price TBA; 69, **Sonderanhaenger Ost 1.5 ton trailer** for Italeri RSO, $58.95; and 70, **Russian Assault Howitzer Su-122i (for StuG III C/D)**, $44.95. MR is imported by VLS, so contact them for precise availability.

New Connection

We're still reeling from all the NC announcements in the last issue and now coming down the pike from New Connection is 35187, **3cm FlaK 103/38**, a handy single-barrel conversion for the Tamiya 2cm FlaK. Reportedly 1,000 of these guns were manufactured in 1944-45 and featured a large belt-fed ammo canister instead of the smaller clips. Next is 35188, **3cm Flakvierling 103/38 Zerstorer 45**, a nifty conversion set based on the 4-barrel Tamiya 2cm FlaK. This variant was first mounted on a Möbelwagen and later tested on Wirbelwind and both form another missing link in the ongoing quest for German weaponry. Just coming out of the molds are 35190, **Sdkfz. 234/4 7.5cm Pak 40**, a very sweet detailing kit for Italeri #255 featuring interior details and a spruced up gun mount; plus 35191, **Sdkfz. 234/4 7.5cm 7B L/48**, featuring interior details and a late-war upgrade on the main gun. Note that this conversion, although designated 234/4, is designed as a conversion for the 234/3 (Italeri #234).

For more information, see the NC ad on page 23.

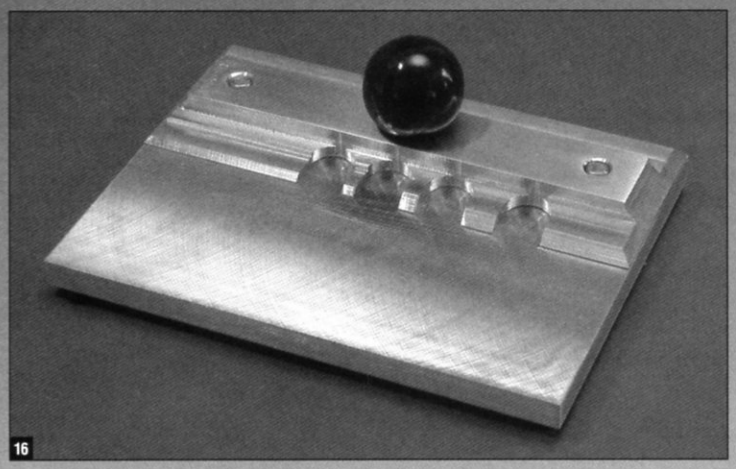
Precision Models

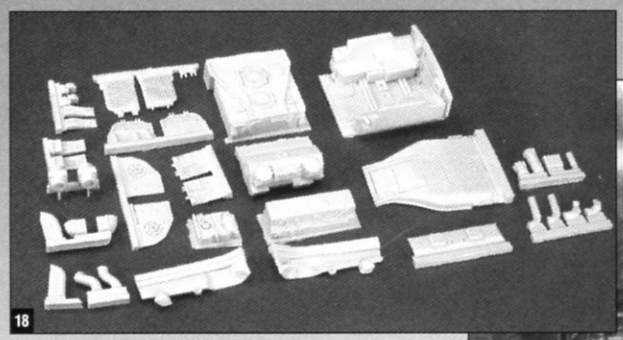
Here's something to light up your life from Belgium. 35041C, **Holz Bunker RRH**, is a searchlight bunker used to position searchlights and light flak guns. Look for it in August for $29.95.

Real Model

More new treats are coming your way through the VLS pipeline. Real Model is a resin German line that is now available on U.S. shores and is producing some neat sets; here's the latest poop. 35047, **Radio Car Conversion for Kübelwagen Type 82**, $30.95; A35001, **Peilstangen (Messing) for Sdkfz. 221/223/250/251**, $15.50; A35029, **Complete Engine & Compartment for M35 Trucks**, $30.95; A35031, **Engine & Compartment for Tamiya Dragon Wagon**, $30.95; A35033, **Goodyear Wheels for Oshkosh (Italeri or RM)**, $22.95; A35034, **Michelin Wheels for Oshkosh (Italeri or RM)**, $22.95; A35035, **Wheels for Hummer/Old Type (Italeri, RM, or MB)**, $15.95; and A35036, **Wheels for Hummer/New Type (Italeri, RM, or MB)**, $15.95.

Revell Germany





16. The Small Shop's 4-inch "Hold and Fold."
17. Sol's Camel set.
18. The very complete and pretty M60 engine set from Model valley.
19. Skif's new BTR-152 (also see the Eduard list).
20. The new FAMO spade set from Tamiya.
21. Tamiya's mighty Dragon Wagon cab-only set.
22. The new figure sprue that soups up Tamiya's late Tiger I kit.
23. Warrior's kick-ass "Cross of Iron" vignette.

If you've been puzzled by the limited availability of Revell Germany kits, you can finally get some sleep. Revell-Monogram has struck a deal to act as the import agent for these kits, so distributors everywhere are finally able to put them on the shelves. Until recently, they were only available directly from Germany and the terms and conditions were a little stiff for most U.S. distributors. That problem is now solved, so enjoy. Be advised that Revell Germany leases molds from Italeri and Dragon, so if a kit sounds familiar—it is. But they do have some stunning kits of their own design.

RHPS

These guys have reworked their initial set of Sherman tracks so they're now fully workable. The **T48 Rubber Chevron type**, which includes enough tread blocks and end connectors for the M4 series plus the M7 and M10. Retail is $19.95 and part number varies by distributor.

RHPS has also announced that they will take a crack at the **T66, T80 and T84 tracks**, bringing us to the 21st century with l-to-l for the post-war Shermans, M46's and M47's. OUTSTANDING! Cromwell and Churchill tracks are also mentioned. Prices and release dates are still TBA.

For more information on all these products, see the RHPS ad on page 23.

Roy Model

This new start-up company from Europe that is cranking out some fan-fu-fu-tastic complete kits in resin. VLS snagged 'em for import, and you're going to love this. 0001, **Dodge D15-15 CWT**, $89.95; 0002, **Dodge D8a-8CWT**, $89.95; 0003, **Ford WOA2A**, $89.95; 0004, **Marmon Herrington Mk.III,** $89.95; 00005, **Opel Kadett Special 1938-39**, $71.95; and 00006, **Horch 830 BL-Pullman Limousine**, $71.95. Frontline reports say these kits are stunning in their accuracy, detail and casting. We can't wait.

Scale Line

These guys are also brand new to the U.S. and brand new to the pages of MMiR. Samples are on the way and we'll look forward to some in-depth reviews in future issues. For now, here's a taste of what they're offering. In addition to some larger scale figures, the 1/35 stuff includes: 35001, **Roadblocks**, $14.95; 35003, **Wheel Set for M998 Hummer,** $14.95; 35005, **Dutch Armored Car Landsverk M38**, $89.95; 35008, **Open Wooden Crates (6)**, $14.95; 35013, **US Paratrooper with Cushman Parabike**, $34.95; 35015, **Dutch Armored Car DAF M39 in German Service (with figure)**, $89.95; 35017, **Jerrycan Truckload for Tamiya GMC**, $25.95; 35019, **German Jerrycans & Oil Drums Truckload**, $25.95; 35020, **German Ambulance Phanomen Granit 2500H**, $92.95; 35022, **Village Water Pump**, $16.95; 35023, **British 5.5 Howitzer**, $86.95; 35024, **German Steyr Wheels with Snowchains**, $16.95; 35025, **Rear Tarpaulin for FAMO**, $14.95; 35026, **Cargo Load for FAMO**, $28.95; 35027, **Earth Spade for FAMO**, $28.95; 35028, **Front Tarpaulin for FAMO**, $11.95; 35029, **FAMO Crew (4)**, $32.95; 35105, **Advertising Signs #1**, $7.95; 35106, **Advertising Signs #2**, $7.95; 35107, **Garage Signs #1**, $7.95; 35108, **Garage Signs #2**, $7.95; 35109, **Traffic Signs**, $7.95; and 35110, **Large Enamel Advertising Signs #3**, $7.95.

Shanghai Dragon

Three more ex-Dragon kits have been announced from Shanghai Dragon and continue the trend of coming back into circulation for less bucks. Look for 6807, **M4A3 HVSS POA-CWS H5 Flamethrower**; 6810, **Chinese Volunteer T-34/85**; and 6811, **M4A3E8 Easy Eight Sherman**. All three will retail for $20.00 each.

SKIF

This relatively new Russian company continues its 1/35th scale invasion with the introduction of the **BTR-152B1**. This is kit no. 290 and it should be available by now. No price was available at press time.

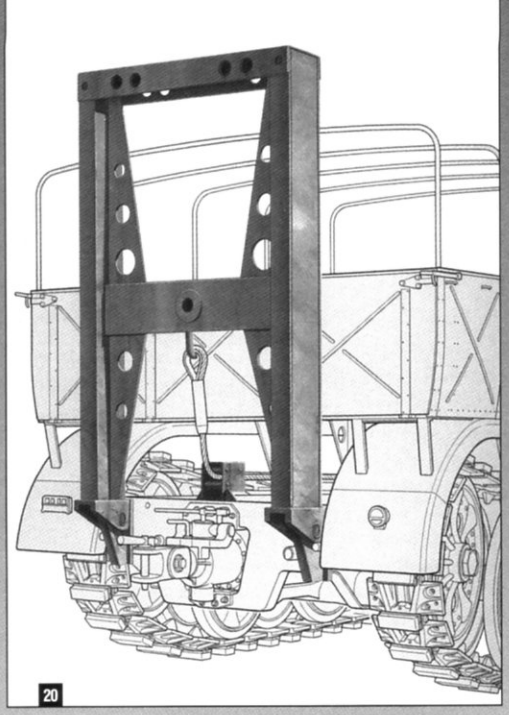
The Small Shop

This new company offers the **"Hold and Fold"** tool. Who and What? The Hold and Fold is an ingenious little device that lets you create precise folds in photo-etch parts. It's essentially a little vise with a variety of different sized projections. The head of the tool is spring loaded for easy shifting of this part and the whole thing is beautifully machined out of shiny, hard aluminum. The basic device will hold parts up to four inches long. It's a bit tough to explain, but the illustration should clear up any questions. This is a cool little tool and a terrific idea.

The basic Hold and Fold sells for $39.95 and if this wasn't cool enough, The Small Shop also offers longer versions of the tool for doing super big parts like KV or Panzer IV fenders (you know, the ones with the long, thin outer lips). We have to stop now because we're getting a little woozy.

We suggest that you contact these guys right away and get a little woozy yourself. Find them at The Small Shop, P.O. Box 2701, Battle Ground, WA 98604. They are also on the web (and who isn't these days?) at www.thesmallshop.com and their e-mail is smallshop@ipns.com.

Don't just sit there, get going!



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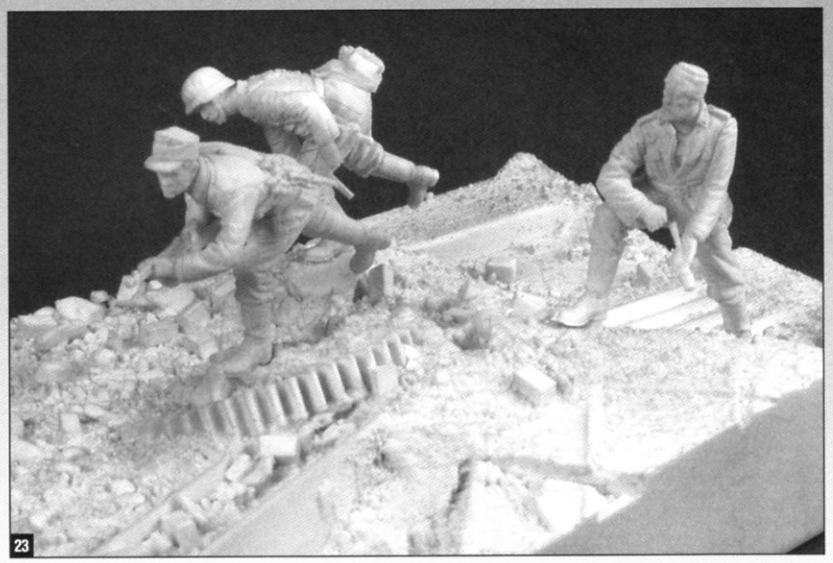

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Sol

There's new Sol figures in Mini-Men, but we saved the camels for you here. They were mentioned last time around and here they are in living black and white. This new pair SL3072, **Camel Set** retails for $19.96 and has one standing, one laying down. The bodies aren't split in half, which is cool. Attach legs to the upright variant and tails to both the upright and resting variant and you're ready for desert fun.

Tamiya

We'd be remiss if we didn't mention that Tamiya will be doing the trailer for the FAMO. This will be 35246, **German 18ton Heavy Half Track Tank Carrier**, officially. We're not certain of what form this will be in when it's released, but the name implies that it'll all be in one big box, like the Dragon Wagon. Suffice to say that we're pretty happy about the whole thing. Stay tuned...

We have also received the previously announced FAMO earth spade. This is a single sprue that contains the spade frame and its blade along with several parts needed to install it on the FAMO. There are also four spare block and tackle assemblies to use as you see fit.

By the way, we have seen the **new version of the Dragon Wagon**. It is essentially the same kit as the first one, but without the trailer. As mentioned before, it contains a single new sprue with some very nice do-dads, included gauges for the welding tanks, welding heads, a wrench, a vise, and two new figures. Additionally, there are some revised elements provided for the vertical lifting device, which is pretty cool. You also get some smashing new box-art. The stock number is 35244 and the U.S retail is $89.00.

We weren't sure if it would be released over here, but we have seen the **spiffed up late Tiger I kit**. This is the familiar kit, but it's packaged with a new crew sprue (that has a nice ring to it). This is four new tankie types generally hanging out. The amended stock number here is 89626-3500 and the U.S. retail is $46.00.

In the highly interesting department, Tamiya has added a 1/35th scale Tiger to its line-up of radio-controlled items. This will be 48202, **Tiger Tank Early Production**, price TBA.

In other news, stock number 35245 will be **JGSDF Motorcycle Reconnaissance set**. This is also price TBA.

There will probably be more new stuff revealed as we move towards the Tokyo Hobby Show (Sept. 21-24) and the Chicago Model & Hobby Show (Oct. 19-22).

TechStar

To complete your Custom Dioramics trees, VLS has two sets of photo-etched palm fronds under their TechStar line. TC1018 is the **Fan Palm Fronds** and TC1019 is **Palm Fronds**. Each sheet contains 24 fronds in varying sizes and each retails for $9.95. Just announced are three Kombo Kits which put it all together. KK001, **Kombo Straight Palm Tree,** includes CD6005 and TC1019; KK002, **Kombo Leaning Palm Tree**, includes CD6006 and TC1019; and KK003, **Kombo Fan Palm Tree** includes CD6007 and TC1018. Each of these sets retails for $12.95. Also slated for summer release is TC3032, **Grey Camo Net**, retail $4.95.

VM/Maquette

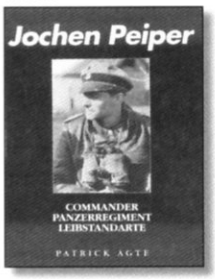
A new gob of kits is emerging from the VM/Maquette conglomerate in Russia. This time around it's 35000, **T-34/85 with PT-3 Mine Roller**, $29.98; 35001, **SU-76M**, $24.98; 35002, **T-34/85**, $24.98; 35009, **BM 8-24**, $24.98; 35014, **ZiS 30 Soviet Self-Propelled Anti-Tank Gun**, $24.98; 35021, **T-34 Track Set**, $7.98; 35022, **T-34 Wheel Set**, $7.98; 35023, **T-34 Turret Set**, $7.98; and 35033, **DshK-12.7mm MG with Crew**, $9.98. Look for them in early fall.

Warriors

There's a 1970's film entitled "Cross of Iron", but there's also a German medal by the same name. Thus Warriors brings us **Cross of Iron Vignette** (35333), depicting three hard-chargin' Wehrmacht types on a factory rubble base. One man has MP40 and helmet with Italian cover, a second wears a Soviet knit cap and belt buckle and prepares a grenade and the obvious leader is charging ahead with PPSh in hand. Pretty neat. $49.95. A new accessory set is also now available, **U.S. 3" Ammo Set (for AFV Club M-10)**, retail $15.95.

Also scheduled for summer release are three ordnance accessories in the Mechanized Warriors series. MW002 is the **M-2/M-3/M-6 105mm Howitzer Maintenance Set**, featuring a variety of tools and accessories, for $15.95. MW003 is a new **T-34/85 Turret Type 1943,** retail $32.95. MW004 is the highly popular **M-3 75mm GMC Conversion (resin and etch)**, formerly produced by KMC and now owned by Warriors. Retail is $49.48.

Jochen Peiper
Commander Panzerregiment
Leibstandardarte
by Patrick Agte
J.J. Fedorowicz Publishing
Hard Cover
670 pages, B&W
ISBN: 0-921991-46-0
$95.00



WE'RE PLAYING A BIT OF "catch-up" here with the latest Fedorowicz titles. This massive work is by the same author that penned Fedorowicz' Michael Wittman biography. And like that title this one also is very expansive in the way it approaches the subject.

The biography is built within the structure of the division, and as you'd expect, Peiper's career is covered thoroughly. But this is expanded to cover many of the officers he served with in the various sub-units along the way.

Like all Fedorowicz books, this book does not skimp in the illustration department, There are over 850 B&W photos and, as usual, many are quite rare. All clearly feature uniform and vehicle details. Many of Peiper's personal documents are reproduced in the final pages, which further enhances the illustration selection.

The book also features complete coverage of Peiper's murder in France in the mid-seventies.

Another feather in the Fedorowicz cap and one German armor fans will have to have.

Sturmgeschütze vor!
Assault Guns to the Front!
by Franz Kurowski
J.J. Fedorowicz Publishing
Hard Cover
282 pages, B&W
ISBN: 0-921991-45-2
$75.00

AT FIRST GLANCE THIS BOOK doesn't quite seem to live up to the Fedorowicz reputation. It's not as lavishly illustrated as some of the other titles and it is a bit on the thin side when compared to their other leviathan titles. However, once you sit down and really absorb the enclosed material, you'll realize that you're holding German armor reference gold.

What the author has done is compile a complete description and mini-history of every unit that trained with or fielded the StuG. Each section is accompanied by the unit's tactical marking, so one can readily identify a specific photo!

This is supplemented with about 36 pages of in combat shots, a series of color plates and a comprehensive photo section of Knight Cross awardees. Not too shabby. If you're working on a StuG model, don't even think about not getting this book.

We'll just wait right here while you run out to get one.

Panzertaktik
German Small-Unit Tactics
by Wolfgang Schneider
J.J. Fedorowicz Publishing
Hard Cover
512 pages, B&W
ISBN: 0-921991-52-2
$85.00

OK. YOU WANT TO WRITE A comprehensive book about the small-unit tactics of the German armed forces in the Second World War. You're a Bundeswehr officer, so you've got plenty of background on the subject. You know your stuff. You've been published before, so people know your work. OK. So the book is done and you did your job well. So well, in fact, that you left no stone unturned. Just let us ask you: did you really HAVE to stuff this book with more that 600 rare photos documenting absolutely everything you discussed in the book? Things that we have never seen before? Things that just blow our minds? And did you HAVE to make them so damned big? Because, now modelers everywhere will simply HAVE to possess this book. Consider the pandemonium that will result, the missed lunches, the late mortgage and car payments, and the missing formula money. Good God man, think of the families!

Official Ampersand declaration: the best Fedorowicz book yet. Go out, buy it and take it like a man.

Panzer Soldiers for "God, Honor Fatherland"
The History of Panzerregiment
"Grossdeutschland"
The German Army's Elite Panzer Formation
by Hans-Joachim Jung
J.J. Fedorowicz Publishing
Hard Cover
438 pages, B&W
ISBN: 0-921991-51-2
$50.00

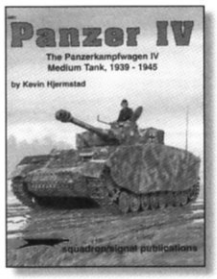
IF YOU'RE NOT ALREADY familiar with it, Fedorowicz Publishing has a long running series on Grossdeutschland. Until the release of this latest title, this has run into three volumes, which are titled *History of the Panzerkorps Grossdeutschland.*

This book specifically concentrates on the Panzer regiment sub-unit, which was the largest in the German army. It consisted of three full-strength battalions, one of which was equipped with the Tiger. The unit was engaged in some of the fiercest fighting on the eastern front, including Kursk.

This is offered as a small format book, no doubt to mesh with the above mentioned titles. However, the earlier works were primarily textbooks with a short, illustrated section. This offering is really more akin to one of the Fedorowicz fully illustrated titles. It contains over 250 photos, and that's pretty impressive for a 438-page book.

This is an excellent addition to your library regardless of whether or not you've read or purchased the other volumes.

Panzer IV
The Panzerkampfwagen IV
Medium Tank, 1939-1945
by Kevin Hjermstad
Squadron Signal Publishing
Soft Cover
64 pages, B&W with color plates
ISBN: 0-89747-413-9
$9.95



THIS VERTICAL FORMAT BOOK is somewhat of a revision of their much earlier title in the "In Action" series. A small amount of the enclosed material has been recycled from the older book, but much of it is brand new. The small B&W drawings that showcase the many small details of the variants are present, as are the profile drawings, but these are supplemented with new photos and many brand new full-color side view plates. A whopping 32 different vehicles are depicted. Color plates are always handy when deciding on which of the numerous color schemes to choose from.

Even if you have the old book, this new volume is still a great bargain.

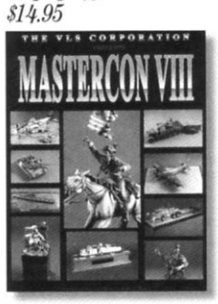
Tank Power 4
PzKpw. V Panther
by Waldemar Trojca
AJ Press
112 pages, B&W with color plates
ISBN: 83-7237-051-6
$26.99

JUST WHEN YOU THOUGHT IT was safe to go back to the bookstore... AJ Press hits us again, this time with volume 4. This installment continues its look at the Bergepanther, then shifts back to exploring the Panther A. You get no less than 57 pages of line drawings this time around (does this guy ever sleep?).

There is a section on the workshop companies of Panther units and this contains many interesting shots of the Fries crane and gantry. This has also inspired a HUGE 23 x 32-inch removable section of plans on the gantry. It's printed on both sides and you also get more bonus plans of the Bergepanther, Panther and the Büssing Nag 4500A truck with crane.

The series is probably one of the best bargains in the hobby today. Bring on part five!

MasterCon VIII
Letterman Publications
Soft Cover
60 pages, full color throughout
$14.95



A NEW LINE OF BOOKS HAS been launched by the founder of The VLS Corporation and first up is MasterCon VIII. This 60-page, full color book includes tons of photos of last year's annual convention, including a wide variety of entries, personality photos, the convention proper and the awards banquet. Also included are six how-to articles covering six of the biggest, most winningest entries at the show.

Plus, you can also read about what sets this show apart from all others and why it's been a favorite of ours for years.

LONGNOSE T-34

The new Dragon Models SU-100 SPG

DML is not one to waste tooling, so it was to be expected that we'd see several variants on their new T-34 chassis. The latest is this snazzy depiction of the long-barreled SU-100. The last of the assault gun/tank destroyers on the T-34 chassis, this vehicle was part of an obvious progression when the base tank was upgraded to an 85mm gun. The SU-85 was thus rendered redundant, and the Soviet designers immediately began the task of upgunning the tank hunter. The weapon chosen was the D10S; a 100mm piece derived from a naval dual-purpose gun. Only about 1800 of these were built, making it a relative rarity in Russian production.

Construction

I began, of course, with the lower hull and running gear. It is very nice, duplicating the Christie type suspension. I found the tracks to be quite well done, with no excessive cleanup and a good fit.

On the upper hull, parts fit was again very good. I didn't like the kit's plastic barrel, so I had it duplicated in aluminum. Then I found no photos showing the slightly larger diameter area at the end of the barrel (perhaps a thread protector for a muzzle brake?). I know the Czechs built some of these after the war, so maybe that's what it is.

On examining more reference photos, I noticed something on the bulged area on the right of the superstructure to accommodate the commander's cupola. Although many parts on this kit had nice weld seams, this part did not, and the welding is very obvious in the pictures. I added this with Squadron putty.

Another point in this same area; part C15, the curved handrail, is impossible to remove and clean up, so I replaced it with the same diameter wire.

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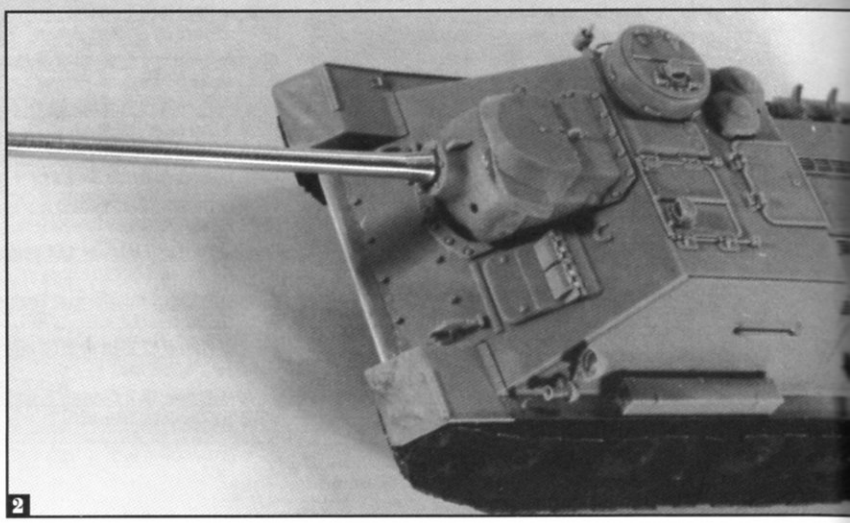
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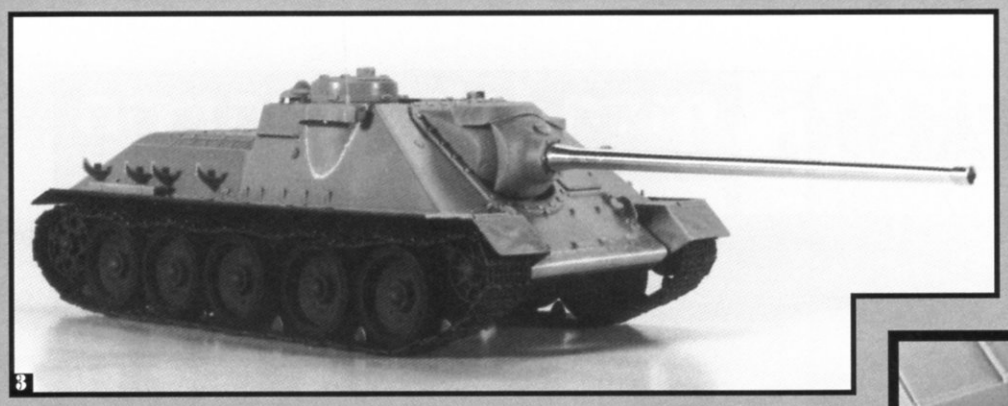
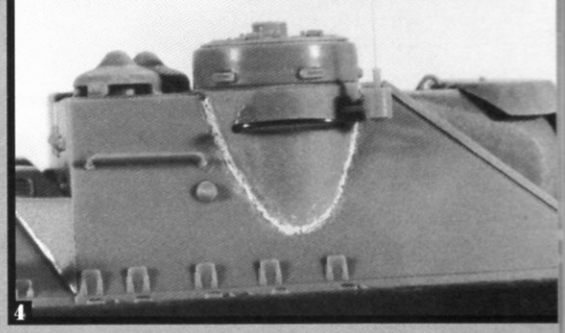
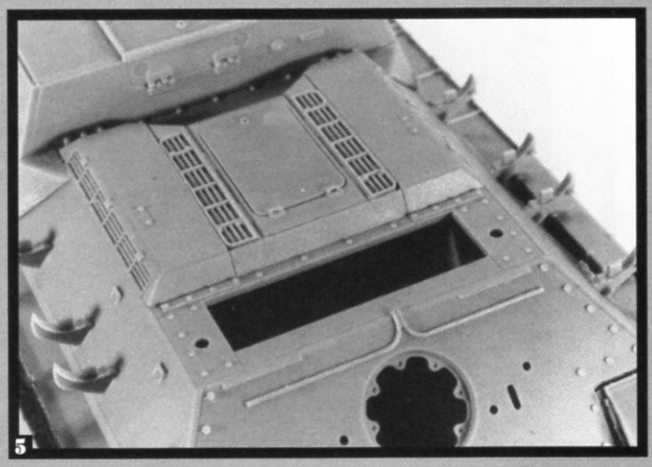
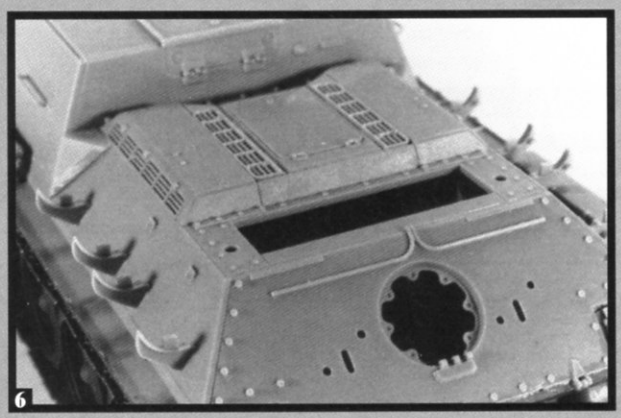


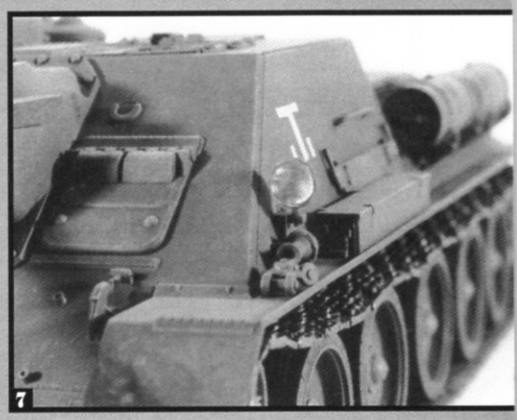




1. - 3. The unpainted vehicle, showing the replacement aluminum barrel. 4. There are fine weld beads on several parts of the kit, so how come there was none on the commander's station? All the photos show this clearly. You'll have to do it with putty. The rounded handrail on this area is impossible to clean; replace with wire. 5. & 6. The DML back deck is obviously built for the super detailer. Bolts on the area covered by the engine cover (but no armored louvers on the rectangular opening) and the correct fastenings for the round cover on the rear plate show this. 7. No MV lenses here, dude. DML provides a nice clear lens for the headlight. Also nice is the holddown on the towing clevises and the bored out (by the manufacturer) horn. 8. The painted vehicle, in boring Red Army dark green, with 'unidentified' SU unit markings from Verlinden. 9. A look down the looonggg barrel; if you're German, you don't wanna see this.

So now I had the lovely lower hull and the gorgeous upper hull ready to put together. That's when the difficulties arose. The back end fit OK, but the front wasn't even close, with part B6 utterly failing to close the gap between upper and lower hulls. With some strip styrene and some bad language, the gap was closed. I wasn't impressed with this. If all the other parts can be made to fit with glove-like precision, why not the hull parts?

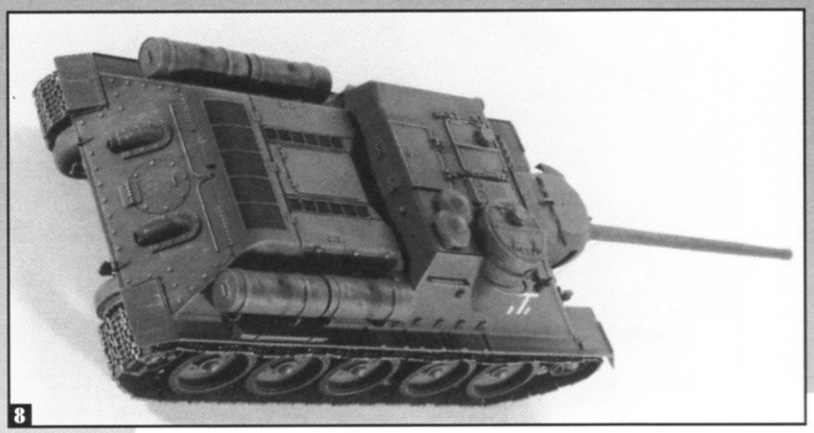




Now, don't get me wrong...this is a very nice kit, and far superior to what has been on the market before. There's a clear lens for the headlight, so MV won't get any of your money on this one. The large engine deck screen is molded on, but underneath is detailed with bolts. Only the two armored louvers need to be added, and the opening for these is there. The circular opening on the rear hull plate for hatch B10 is correctly detailed, so the kit is obviously set up for one of the after market engine sets. This hatch, by the way, is such a good fit that it requires no cement.

Paint and Markings

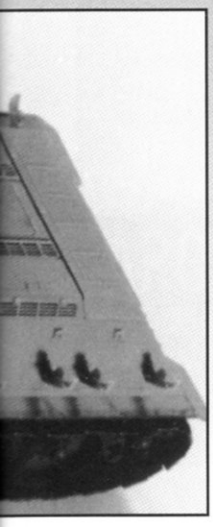
Not much choice here, like I've said before on Russian tanks. There's dark green or white. This one is Pactra dark green, drybrushed with the same manufacturer's interior green. The markings are Verlinden, from an "unidentified unit" of SU-85s. Hey, the unidentified unit has had its equipment upgraded.



Conclusion

Another gap in WWII armor history plugged. What else could these guys make on this chassis? Apparently some 76mm tanks are on the way. How about some weird stuff, like a recovery version, or a T-34 bridgelayer, or the T-34/STU tank dozer?

—Joe Morgan



MMiR RECCE

Dragon Models SU-100. Kit number 6075. Kit graciously provided by the manufacturer. Suggested retail price $28.98.

References

Russian Tanks 1900-1970, by John Milsom, Galahad, New York, 1970.

Soviet Mechanized Firepower 1941-1945, by Steven Zaloga and J. Magnuski, Arms and Armour Press, London.

Soviet Tanks and Combat Vehicles of World War Two by Steven Zaloga and James Grandsen, Arms and Armour Press, London

Getting Mobile With The Wagon

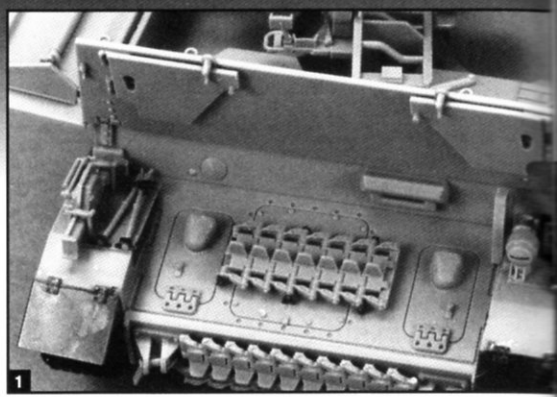
The latest AA installment from Tamiya

What could this be? A plastic kit? WOW! Having been consigned to the world of resin for the past 200 years, the Tamiya Möbelwagen was just the ticket for a speed build fest. With quite a few of the newer Tamiya kits starting to pile up on my shelf I was glad to get the chance to dig in to some of this high tech plastic. I've been reading a lot about them ever since the release of the Big T's Pzkfw. IV Ausf. J. As you can guess, I have a few on the pile.

The name Möbelwagen is a nickname and means "moving van" in German. This is an appropriate designation due to the high, box-like super structure. The actual designation is Sd. Kfz 161/3 3.7 cm Flak auf Fgst Pz. Kpfw. IV (sf). Due to the overwhelming superiority of allied air power, a self-propelled anti-aircraft gun was urgently needed. In early 1943 the venerable Pzkfw. 38 (t) was used as the basis for a vehicle mounting the 2cm Flak 38, which did not possess the firepower to deal with the ever-increasing air attacks on German armored units. As was the practice with the German Army during the war, obsolete weapons platforms were utilized in new specialized roles. So it was decided to use the Pzkfw. IV chassis as the basis for a self-propelled anti-aircraft gun.

The Möbelwagen was considered an interim solution until the Kugelblitz or an anti-aircraft version of the Panther became available. Hitler reviewed the prototypes in December 1943 and they included examples mounting either the 2cm quad Flakvierling 38 or the excellent 3.7 cm Flak 43. The Flak 43 version was chosen and there were only a few prototypes of the Flak 38 made. This is good for us because we now have a model of the vehicle that saw action. The Flak 43 version also had a lowered floor, which decreased the overall height of the vehicle. The original design of the folding sides consisted of spaced 20mm plates, which was later replaced by a single plate of 20mm armor.

Orders were placed in early 1944 for 20 vehicles per month, with the first being ready in April. A total of 240 Möbelwagen's were produced and they were distributed to armored units in the west just in time for the Normandy invasion. The engine was tweaked a bit, giving a total of 272 HP by raising the rpm's from 2,600 to 2,800. The Möbelwagen could carry 416 rounds of ammunition and in combat situations usually had a crew of four. The wicked Flak 43 could fire 250 rounds per minute at a distance of 6,600m. The '43 was capable of 360 degrees of rotation and an elevation of +90 degrees and a depression of -6 degrees. With the exception of crew protection, it was a pretty potent weapon.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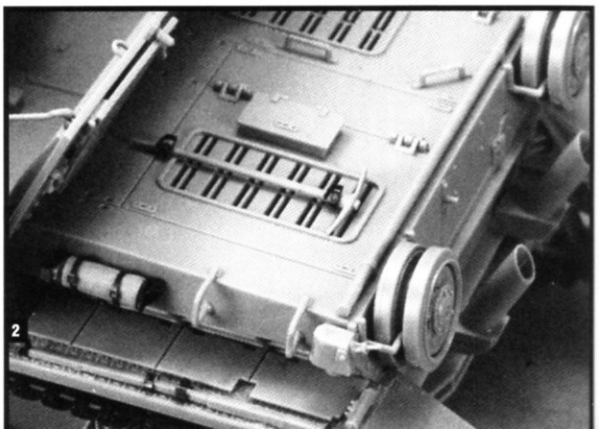
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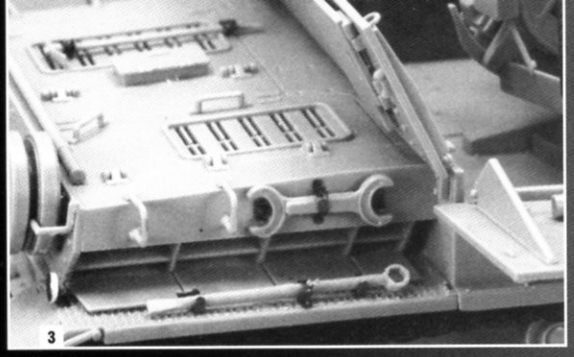
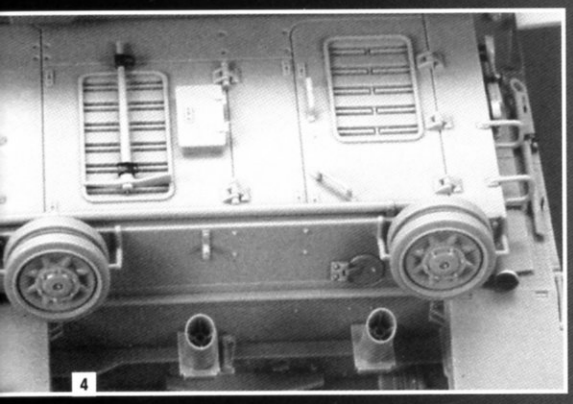
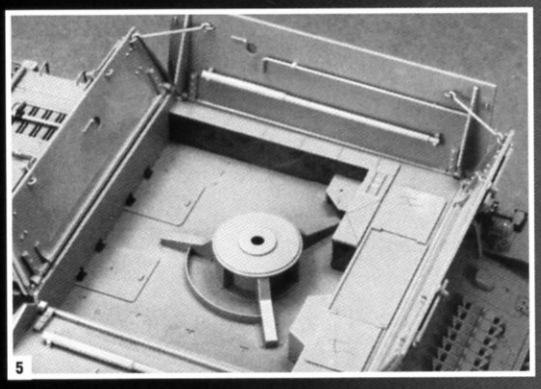
Peachy plastic

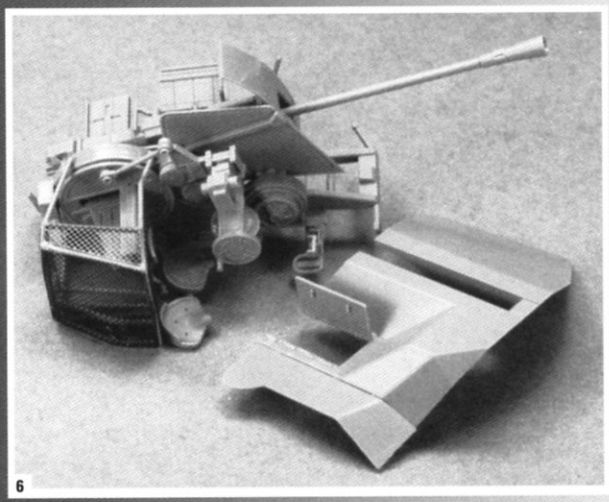
The kit is packaged and presented in the high quality manner we have come to expect from Tamiya. This is a newly tooled kit, which shares some of the components from the Ausf. J kit, mainly the suspension and tracks.

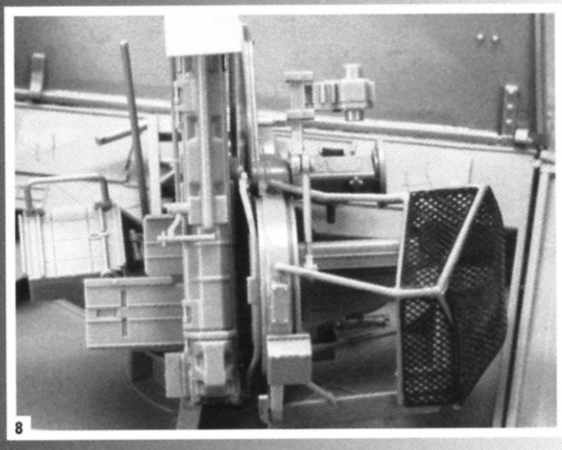


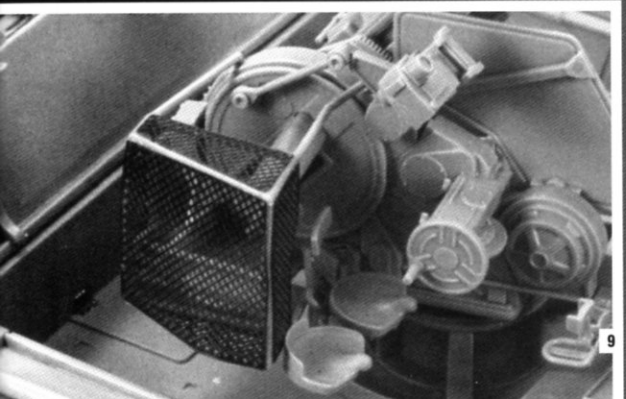
1. The front end features many of the now familiar Panzer IV H and J details. 2, 3. Same deal back here. This kit is a reviewer's dream. Included is the now famous PzKpfw. IV tool set, so it's a toss of the coin whether you want to go through the hassle of removing the tool mountings and replacing them. I did use the Eduard set for some enhancements. The tools aside, the etched set in some cases will cause more work with only marginal gain. 4. You will also have to remove a lug on the right side rear in order to get the spare road wheel to sit flat. 5. The gun compartment floor features some excellent skid plate detail and access doors. 6-8. The new Flak 43 is an awesome little model and I'm hoping to see it released as a separate kit. 9. The one item included in the Eduard set that came in handy was the screens for the shell basket. The Tamiya mesh is the only negative I could find in the kit. The tube structure for the basket is very delicate and once cleaned up, the Eduard screens fit perfectly. 10. The shield locking hooks on the right side. I thought about replacing these with bent wire, but the kit parts, #E43, cleaned up just fine.

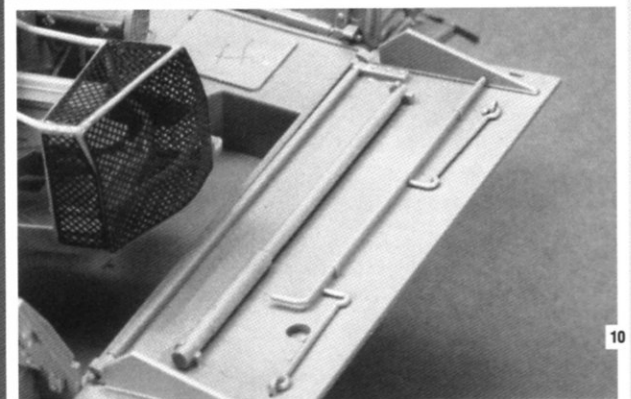












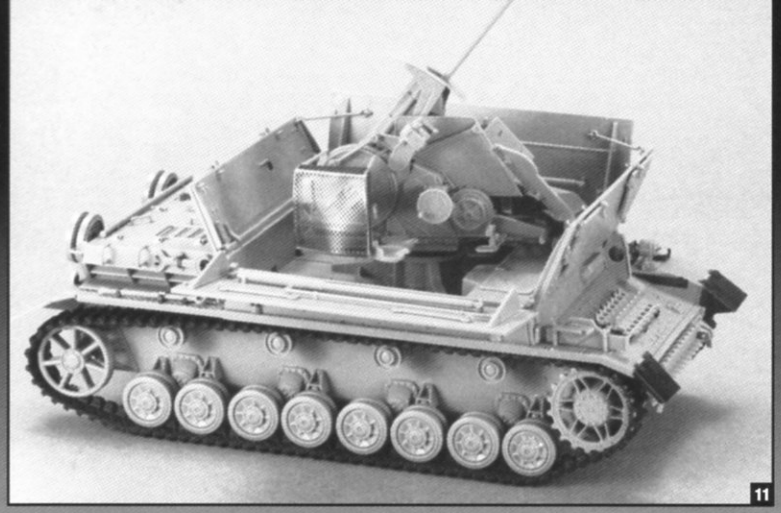
The Flak 43 is all new and it's a stunner. I would not be surprised to see it released as a separate kit. The instructions consist of the usual book format with only one marking option for an unknown vehicle from an unknown division in France 1944. In actuality you get two crosses on the decal sheet. Also included is some mesh for the spent shell basket and a decent figure as far as injection molded figures go.

This kit is a reviewer's dream. Shake the box, not too hard, and out pops a kit ready to paint. A no brainer. However, with every kit there is some room for improvement, but with this kit, not much. I used the Eduard set for some enhancements and that is about it. With no disrespect to Eduard, the photo-etched set is not really necessary and in some cases will cause more work with only marginal gain.

Included is the now famous Pzkfw. IV tool set, so it's a toss of the coin whether you want to go through the hassle of removing the tool mountings and replacing them. The one item included in the Eduard set that came in handy was the screens for the shell basket. The Tamiya mesh is the only negative I could find in the kit. If you don't mind the mesh, this is definitely an out of the box build.

Construction begins with the lower hull and running gear. The level of detail on the lower hull and suspension units is outstanding. It's a pity you won't see it. Two different idler wheels are included, so you have a choice of either the early or late style. I went with the early, thinking this was a rebuild. I was surprised that Tamiya omitted the poly caps on the road wheels. A definite departure from the norm. Steps 1 through 5 were completed in one evening of modeling of roughly 2 hours. I also added the kit tracks at this time. I was surprised that they went together so well with just a bit of liquid cement. As nice as the tracks are, they are still rubber band style so a replacement set would not hurt.

Before joining the upper hull I had to make a decision as to whether or not toss the Eduard fenders. The rear fenders in the kit were fine and had rivet detail on the outer surface, so I used them. The front fenders are molded on the hull and are a little simplified. On the real thing, the front portion of the fender is hinged, allowing it to flip up. I removed the front portion of the fender with a razor saw using the pre-bent Eduard fender as a



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template. The Eduard set also includes the hinges, which are very nicely done. The driver's and co-driver's hatch handles were removed and replaced with brass rod. The hatches slide in towards the center of the vehicle and you can position them in either the open or closed position. With these minor modifications out of the way, I joined the upper hull to the lower. The fit was perfect.

Most of the work in this kit revolves around detailing the upper hull. I added the Eduard shell containers parts #50, 53 & 61, which were nothing more than a series of flat plates with some rib detail. I also spruced up the tool details with the Eduard clasps. I used the kit jack and mounting brackets, but used the Eduard mounting for the fire extinguisher and the tow hooks. You will also have to remove a lug on the right side rear in order to get the spare road wheel to sit flat. As far as super details go, it's up to the builder. The kit is very strong on its own.

Shields up, Mr. Sulu

For the fold down side shields, I pretty much followed the instructions. The Eduard set includes replacement hinges and locking hooks but they're not worth the trouble. The hooks, part #69, are flat due to the nature of photo-etched although they should be round. I thought about replacing these with bent wire, but the kit parts, #E43, cleaned up just fine. Be careful, they are quite delicate. I didn't know what the final placement of the shields would be, so I made them workable. Follow the instructions and you won't have any problems. By making them workable, you will make the job of painting a lot easier.

The instructions clearly illustrate three different positions for the shields. Running position with everything folded up and locked

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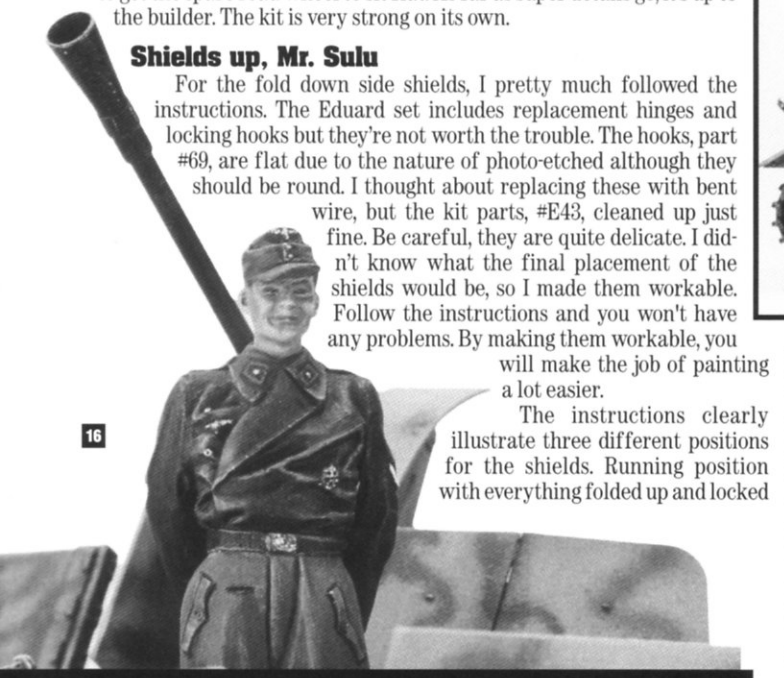

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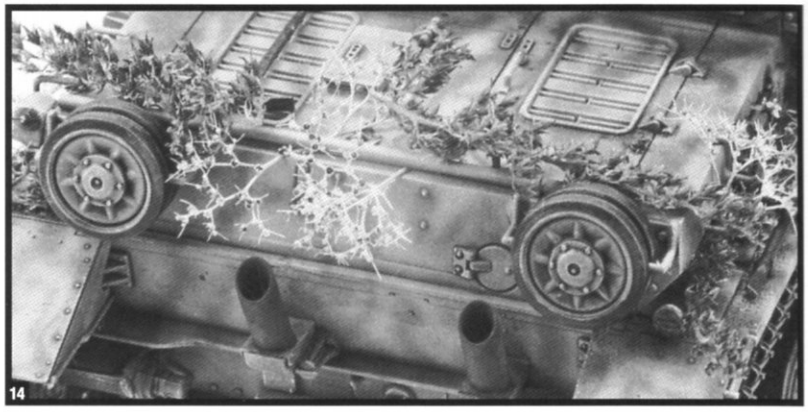

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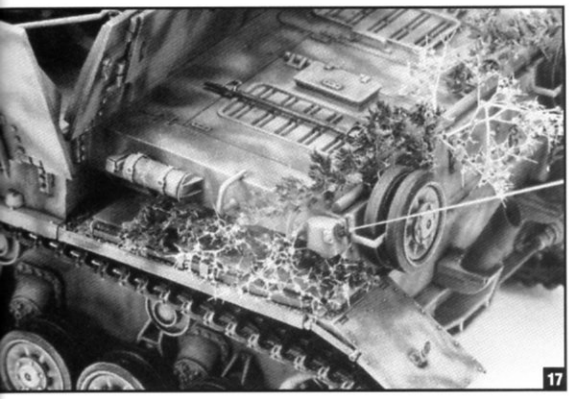
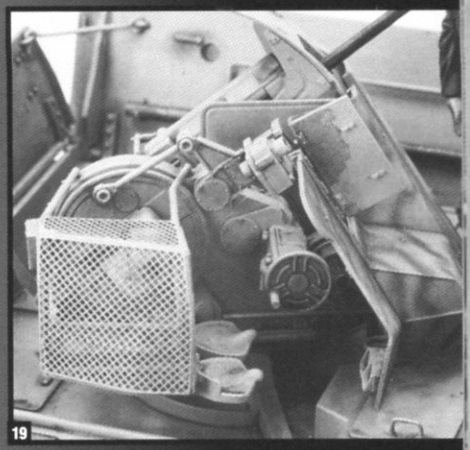
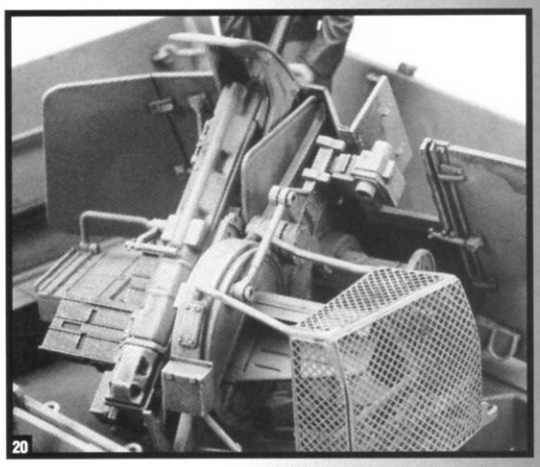
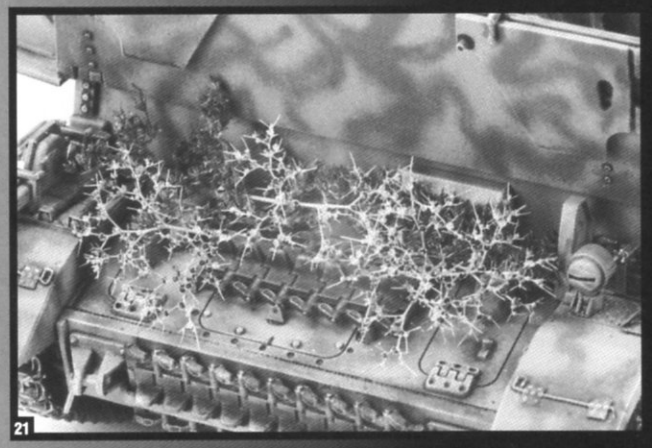
11. Finished and ready to paint. I didn't know what the final placement of the shields would be, so I made them workable. By doing this, I made the job of painting a lot easier. Before joining the upper hull I had to make a decision as to whether or not toss the Eduard fenders. The front fenders are molded on the hull and are a little simplified. 12-14. The camo scheme was done with a base coat of Tamiya Desert Yellow and the squiggle pattern was applied using slightly thinned Tamiya Red Brown and Olive Green. 15, 16. To add a little interest, I added a relaxed figure from the excellent Takahashi range. The facial expressions are some of the best out there. The figure was painted with Vallejo acrylics. Interestingly, this figure was inspired by a photograph of a flak crewman manning a Whirblewind. Hey, it's pretty close! 17-21. The completed model—it's a peach alright. The foliage is a product called super trees and some tiny stuff I found in the garden in the fall. It was painted and washed with the Vallejo acrylics after it was attached to the model. In shot 18, it's evident that I thinned the edges of the gun shield a bit. Also notice that in shot 20, the Eduard shell containers are visible. These are simply a series of flat plates with some rib detail.





down, horizontal firing position with everything down and anti-aircraft firing position with the shields up but canted a bit. You have a choice for the positioning of the armored hatches, parts #29 & #30, on the front and back. Either folded in for running position or folded out and locked to the sides for the anti-aircraft firing position. I ended up going with a combination of the three, not firing, not running, but somewhere in between.





Well, Flak me

The new Flak 43 is an awesome little model. There isn't much to do other than put it together. The Eduard set has a lot of bits to enhance the kit, but I was happy with what was in the box and had a great time putting it together. As I mentioned earlier, the Eduard set was a must for me, just for the spent shell screens alone. The tube structure for the basket is very delicate and once cleaned up, the Eduard screens fit perfectly. You could, however, use the kit supplied mesh and get decent results. The gun can be made to articulate, which gives you latitude when deciding on the final look of the finished model. I really liked the movable linkage for the gun sight.

I thinned the edges of the gun shield a bit and assembled it per the instructions, but set it aside to make the painting of the gun easier. I know it sounds like the easy way out, but the kit was irresistible by itself.

Paint the van

The model was washed and primed with Armory white primer. The camo scheme was done with a base coat of Tamiya Desert Yellow and the squiggle pattern was applied using slightly thinned Tamiya Red Brown and Olive Green. The scheme was then toned down by over spraying a very thin mixture of desert yellow. Weathering was kept to a minimum. I was looking for the "off to the front" look. To add a little interest, I added a relaxed figure from the excellent Takahashi range. The kit figure is very good but I have been looking for the chance to use one of these excellent new white metal miniatures. The facial expressions are some of the best out there. They basically paint themselves. No kidding.

The figure was painted exclusively with Vallejo acrylics. I am pretty much sold on these paints. Having used oils for many years, it took some getting used to, but I am just about converted over. I also hear that they are coming out with a range of airbrush colors. I can't wait.

I also added some foliage. For this, I used a product called super trees and some tiny stuff I found in the garden in the fall. The foliage was painted and washed with the Vallejo acrylics after it was attached to the model with white glue. I do not have a source for super trees, but it seems like the same stuff that you used to get in the Verlinden tree kit.

This kit is a real peach. The level of detail and the fit of the parts are almost scary. Although the price of the new generation Tamiya kits is getting up to the $50.00 range, you get what you pay for. It's the top drawer of injection molding technology. As far as the Eduard set goes, it's not really needed but some of the bits do come in handy. Again, no disrespect to Eduard, but the big T is getting that good. If Tamiya ever comes up with a creative alternative to the rubber band tracks, they will be unstoppable. This kit was a real joy to put together and a true speed build.

—Nick Vanston

MMiR RECCE

Tamiya Möbelwagen. Kit number 35237. Kit graciously provided by the manufacturer. Suggested retail price $45.00.

Eduard Möbelwagen update set. Kit number 35277. Kit graciously provided by the manufacturer. Suggested retail $19.99.

References

Panzer IV and its variants by Walter J. Spielberger, Schiffer Publishing Ltd. ISBN #0-888740-515-0 (english edition). Please tell me you already have this... Pictures, plans and love.

Encyclopedia of German Tanks of WWII, by Peter Chamberlain & Hilary Doyle. Arms and Armour Press. ISBN #1-85409-214-6. Carry this one with you wherever you go. Several good shots and tech info.

German Tanks of WWII by Dr. F. M. von Senger und Etterlin, Stackpole books. An oldie but goodie—1968 vintage.

Out Fuchsed

We look at the Bad Bundeswehr 6-rad from Revell of Germany

Modern German vehicles seem to be all the rave nowadays with Revell of Germany pumping out plastic versions of German armor like the Battle of Kursk is still going on (plus Tamiya's wonderful new Leo 2A5, but that's another story). Back in the bad old days of the Cold War, one could find a Leopard here and a Marder there, but now, in the age of peacekeeping interventions with Bundeswehr in action, we German armor geeks have it made. Revell of Germany's kit of the Transportpanzer 1Fuchs gives a nice plastic rendition of Henschel Wehrtechnik's successful personnel carrier.

Henschel Wehrtechnik received the contract for the Fuchs back in 1977 and completed delivery of the vehicles by 1986. (The company was known as Rheinstahl Wehrtechnik till 1996) The Fuchs has been around awhile. The Fuchs is a 6x6, all-welded steel armored personnel carrier. It carries 10 fully equipped infantrymen, who are protected by the armor from small arms fire and artillery shell fragments. The troops sit on individual bucket seats as opposed to the normal benches seen in APC's. The vehicle is amphibious and powered by an eight-cylinder Mercedes-Benz OM 402A engine. Those modern Fritzes get to ride to combat in class, eh?

One of the neat things about the Fuchs for us model making mooks, is the many variants of the vehicle. One could expend a lot of that precious model making time with a Fuchs production line. Besides the standard APC variant, the Fuchs comes in these flavors also: command and communications; RASIT battlefield surveillance radar vehicle; engineer variant; supply vehicle; nuclear, biological and chemical reconnaissance vehicle; two versions for electronic warfare; MILAN anti-tank guided missile carrier; ambulance and an explosive ordnance disposal variant for the German air force. There was an 8x8 variant tested at one time, but it did not enter production. The German army also has the Fuchs KRK that is an up-armored version for use in crisis and peacekeeping operations. This version is in use with KFOR in Kosovo. The Fuchs was also exported to Israel, the Netherlands, the United Kingdom, the United States and Venezuela. Most of these exports were the NBC recon vehicle or EW variants. The US Army and Marine Corps use the vehicle as the M93 and M93A1 Fox NBC Reconnaissance System. This vehicle saw service in Operation Desert Storm.

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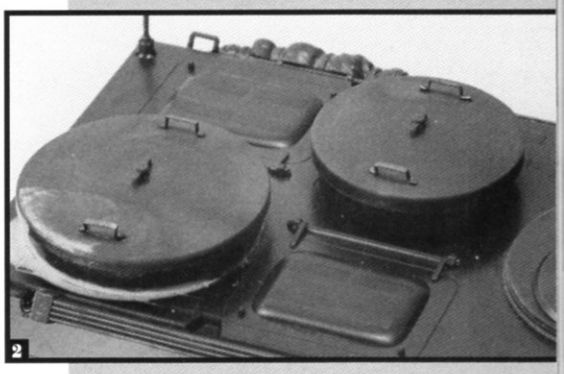
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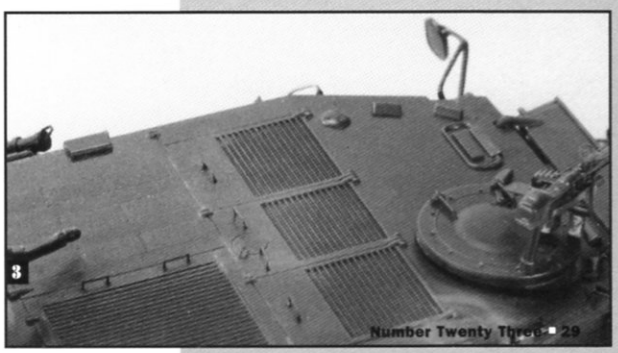
Fox hunting: the kit

Revell's Fuchs comes in their typical glossy black box, with the kit inside consisting of three sprues of green plastic parts: the upper and lower hull, a clear parts sprue and eight semi-gloss rubber tires. There is a nice decal sheet and instructions printed on newspaper stock. The instructions are not well rendered, more on that later. One nice touch by Revell is to include thin wire for the radio antennas in their kits that look good and one does not need to run down to the hardware store to root through the wire bin for that perfect antenna.

The plastic that Revell GmbH is using for these kits is strange. It is a glossy green, which looks like the stuff coming out of East Europe. I suspect the kits are molded in the east, possibly to cut costs. To me the plastic is both soft and brittle. You can bend it a bit before breaking while any sanding will gouge it if you are not careful, so 0000 steel wool is the way to go. Yet, when you cut the parts off the sprue or to make changes,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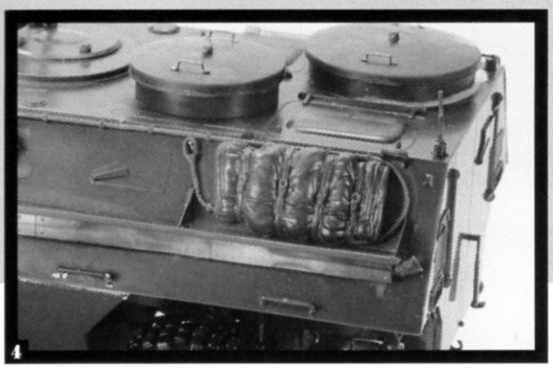
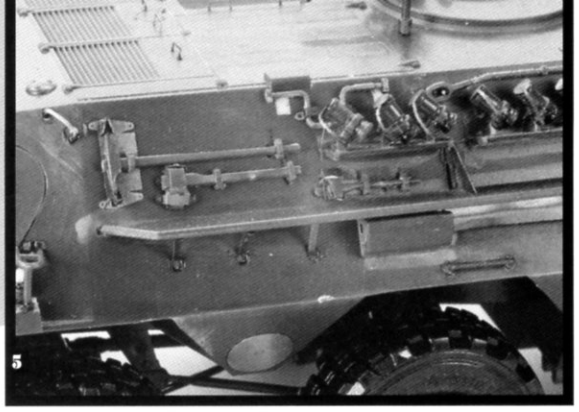
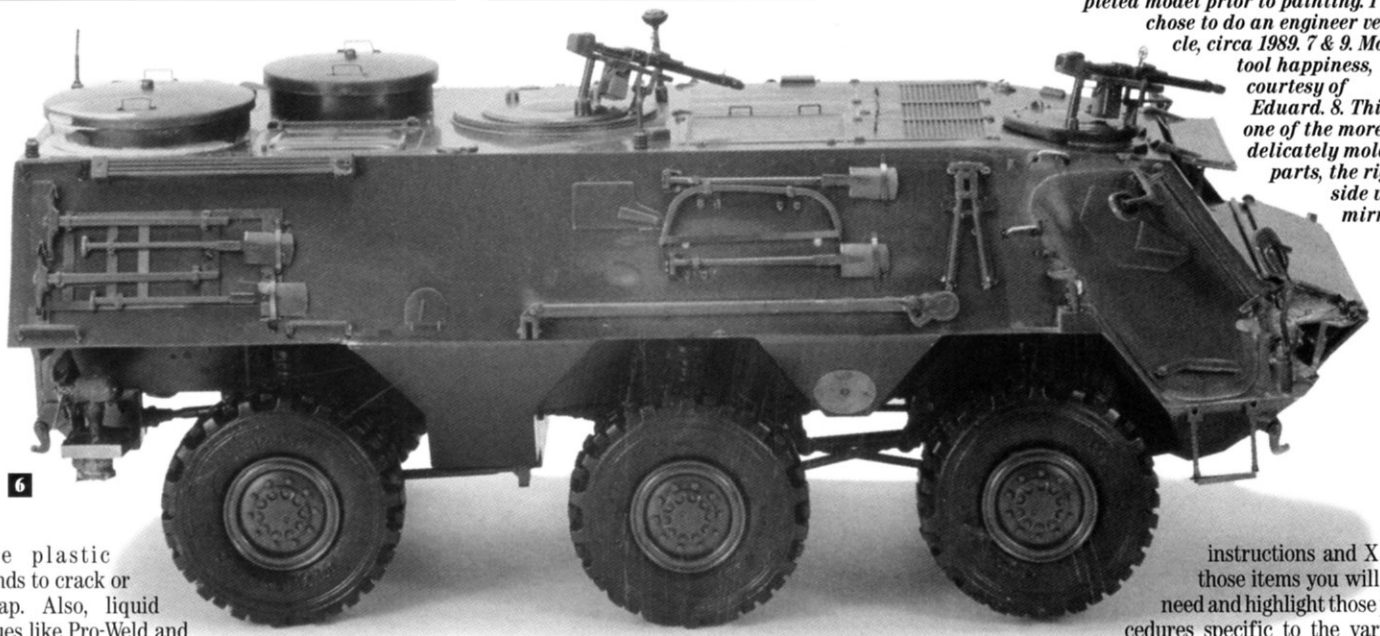




1. The rear MG 3. These were not all that great. They sit at a downward angle due to their flexible mount. The Eduard parts help, but not much. 2. The two large storage containers located on the roof. They normally contain different items, depending on what version of the vehicle it is. 3. The upper vent detail was rendered well. 4. The styrene net provided in the kit. This is one part Eduard skipped. 5. Eduard does help you dress up the tools and the smoke launchers. 6. The completed model prior to painting. I chose to do an engineer vehicle, circa 1989. 7 & 9. More tool happiness, courtesy of Eduard. 8. This is one of the more delicately molded parts, the right side view mirror.



the plastic tends to crack or snap. Also, liquid glues like Pro-Weld and Super-Glue de-bonder devour this plastic. Be careful out there.

The kit allows you to build the standard infantry carrier, the Milan ATGM carrier, the engineer vehicle or an ambulance. The decals provided are very good and well registered. Most of the vehicles you can make are from the German army in Bosnia, however markings for an ambulance used during the 1992 UN ops in Somalia are provided. Revell did not leave out the good old days by providing markings for an engineer vehicle in the 1989 German army.

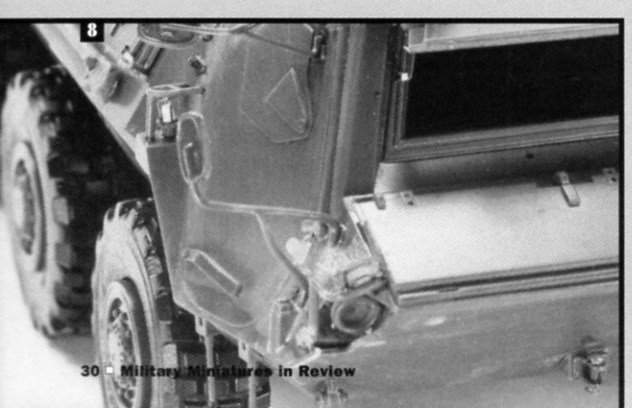
The great editors of MMiR provided me with an excellent photo-etch set from Eduard and a set of resin wheels and tires from a Germany company called MR. Eduard's set is necessary, in my opinion, to make a good model of the Fuchs out of the Revell kit. It provides many details either lacking in the kit or upgrading some of the poorly molded ones. But there are some parts that only madmen would try to manipulate; I usually left those off to protect my fragile sanity. The resin tire/wheel set is incorrect. They are too thin and have the wrong tread pattern from what I see in all the pictures of the Fuchs I have come across. Into the spares box they go.

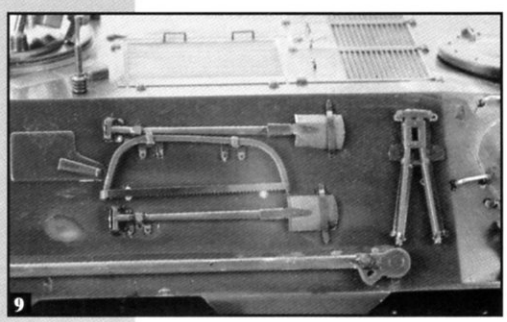
Fuchs to go

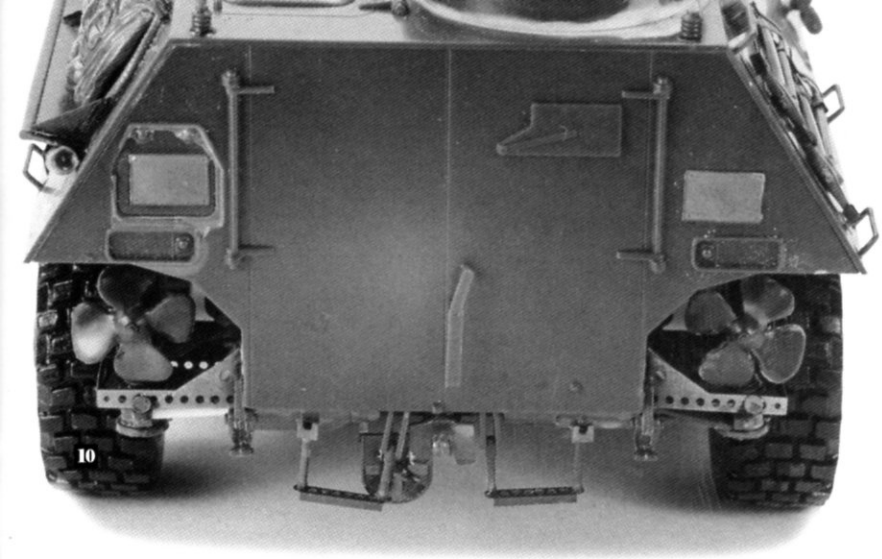
OK, let's build this critter. You need to make some decisions before you start this kit. Also, you must have Concord Publications Company's *German Wheeled Fighting Vehicles* book by Michael Jerchel to help with the decisions and to aid in deciphering the poor instructions from the kit. I did not start with the book in hand as I didn't find it buried in the local hobby shop shelf until I was well into the vehicle. This caused some pain that could have been avoided. First you need to decide on which variant you want to make and then go through the instructions and X out those items you will not need and highlight those procedures specific to the variant you are making. Do this or you might end up crying later. I choose to do the engineer variant from 1989 as the Cold War waned.

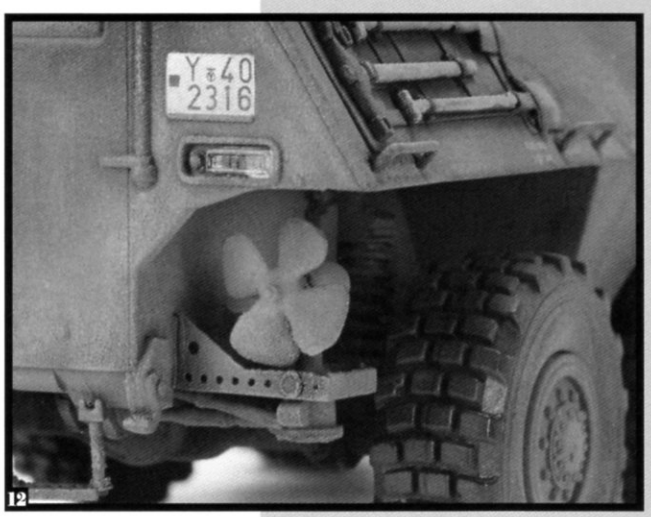
The next decision has to do with the instructions and sequence of construction. Let's talk about these instructions. They are made to cover a multinational market so they are of the picture only variety. This can cause some confusion on how parts go together so having a reference ready is crucial. Also, they are not well drawn with perspective being occasionally off. This can cause the modeler to put a part on completely wrong unless he has a photo to check. Fortunately, *German Wheeled Fighting Vehicles* contains plenty of pictures. The sequence of construction is a problem too. I decided, since I was reviewing the kit, to follow the build as Revell intends. I suggest you decide not to do this or you will end up breaking parts, knocking off tiny photo-etch bits and teaching your children some very bad words. I recommend skipping to step six and then only putting the upper hull to the lower hull, then going to step 10 and work through 26, completing the suspension and well-detailed drive train. Then you should go back to step 1 and work through the rest of the kit putting all the goodies on the model. This was the sequence Revell used in the Luchs kit and I cannot figure out why they didn't follow it with the Fuchs. If you are using Eduard's photo-etch, make sure you mark each step where you will replace or modify the plastic parts with the metal ones.

One other comment before looking at construction specifics, dry fit everything first on this kit. This kit builds up nicely but it is not engineered or molded to Tamiya standards. There can be some off registered moldings, flash and

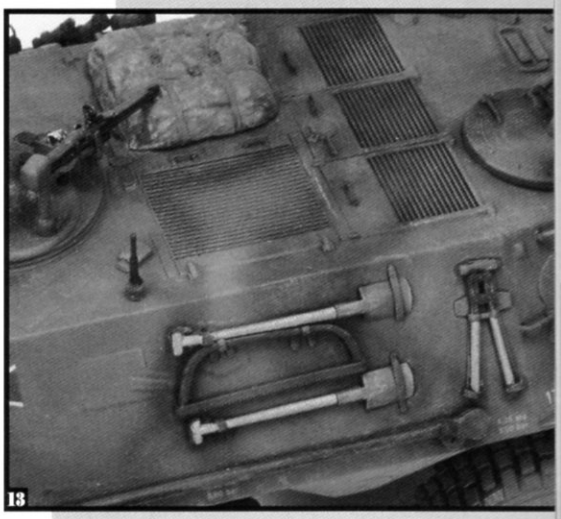








10. The back end. Note the propeller areas, dressed up with Eduard frames. Getting the propeller housings lined up is critical due to the series of drive shafts that connect to them. 11. I'm checking for the proper "sit" here. The middle wheel on the far side needed some adjustment. 12-19. Various views of the finished kit. I chose a NATO scheme and used Polly-Scale paints throughout. Although this scheme appears hard-edged in many photos, it is actually applied with an airbrush. This was the method I used. I was not keen on masking my model after the "primer incident." The kit's decals were used, applied over a coat of Future floor wax. Dullcote was sprayed on to deaden the gloss finish. Due to their pliable nature, the kit's tires conveniently came off for painting. I was never completely satisfied with the look of the MG 3s. An aftermarket solution is the way to go here.



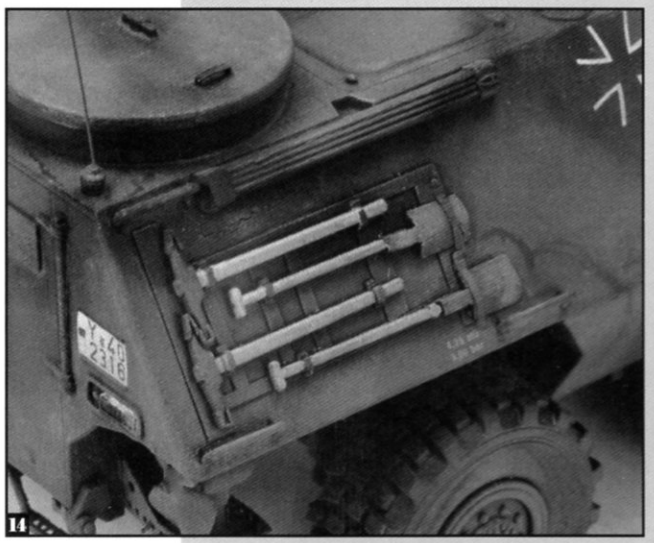
down-
right wrong pin-to-hole combinations in the kit. Also some of the drive shafts are a tad short. So to paraphrase the old carpenter's saying: "dry fit twice, glue once."

Starting at step 6 in the recommended sequence (do as I say, not as I do!) here are the highlights of construction. Note: you need to put in the light wells, parts 7 & 8 from step 1 before doing step 6. I almost forgot to mention this. They are a bit difficult to get right, as there are no locator marks, so take your time. The upper and lower hulls do not fit well; I had to trim the lower hull at the front corner of the forward wheel well to get the hulls together. The resulting joint leaves some deep seams, these, along with some deep sinkholes need to be filled in or they will be visible as the vehicle sits up high. Now we move to the drive train and suspension.

Both the Fuchs and Luchs kits come with very detailed undersides. This is a tad tedious to build but turns out very nice. Some of the connector rods and drive shafts are too short, but not by much and they usually will have just enough length to fit. It is imperative to correctly construct the propeller housings in steps 10 and 11. If you use the photo-etch frame you must be even more careful. The propeller housings will later be interconnected with a series of drive shafts. Part 50 goes on each housing in an opposite fashion. I missed this minor detail and my drive shafts later would go on right, so I had to use some modeler's license to make it look right. If you used the photo-etch housing frames, be careful to make it to exact measurements of kit parts 48 and 49 or your shafts will not fit. Eduard suggests you trim the kit frame from parts 48 & 49 but I scratch built the housings using the Eduard frame. You may consider just gluing the front and rear portion of the frame to the kit housings. The rest of the suspension and drive train is straightforward, just check pin to hole fits. Oh, and good luck figuring out how everything should face if you choose to turn the front two sets of wheels. I'm no automotive engineer so I didn't even think twice about doing it.

Now, bounce back to step one and proceed with putting on all the details. The photo-etch comes in handy providing brackets and replacing some of the kit tool holders, shovel blades and many detail additions. Eduard provided replacements for the door and hull window ballistic covers. However, the ones Eduard provides are the holed version which appear from source photos to be only used on the up-armored Fuchs KRK variant. This is too bad, as the kit ones are molded on and would look better as separate pieces that could either be placed open or closed. The kit cannot be made into a KRK variant without major modification. Other noteworthy construction points are:

- Consider replacing handholds with brass wire and filling in the location holes. I did this with the smaller ones.
- The doors (parts 3 & 4) don't seem to fit well and leave a gap, but photos show that the real vehicle is like that



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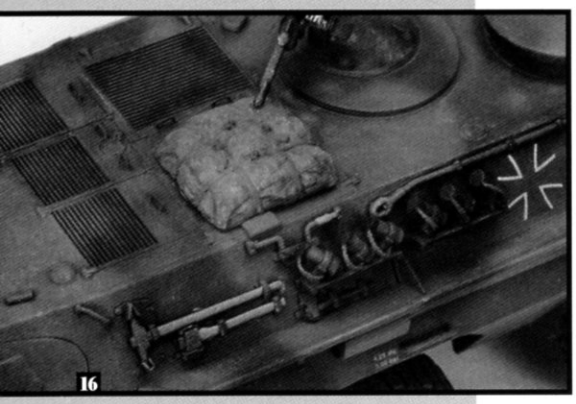
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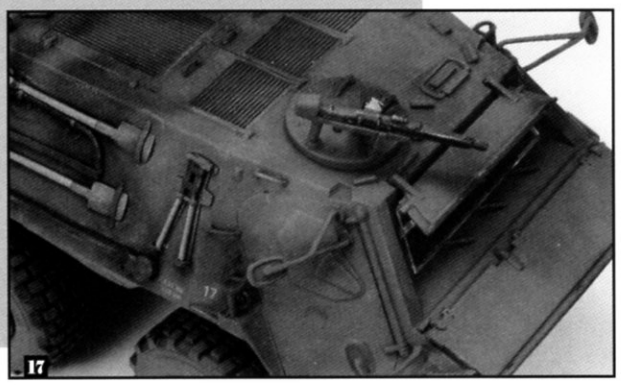
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camouflage net (part 147). Many pictures show vehicles without the net with the straps hanging. This would have looked nice.

• Use the Eduard parts to enhance the machine guns, if they go on your variant. The kit guns are not well molded and full of flash. Also, they sit at downward angles caused by the flexible mount that the gunner uses to manipulate and fire the gun.

• In case you are wondering, part 146 is a flotation device, probably used during amphibious operations for crew safety. I left mine off, as the part looks hokey.

• Put the front glass armor panel rests (Eduard parts 32 and 33) on after putting on the windshield glass. I had to remove mine in order to fit the glass in. You may consider leaving the armored plate off to facilitate installing the windshield.

Ich bin Fertig

To finish the vehicle I primed it using Armory's white primer. This primer snowed coming out of the can and made my model look like it was hit with car undercoating. I cleaned it off and tried again and the primer sprayed nice for awhile but shot another burst of solids on the model. I could not clean all of this off without loosing all the detail. So instead of trying to hide the rough finish, I decided to use it as part of the weathering process by dry brushing it with light colors and washes. I think it worked, so I turned lemons into lemonade. However, Armory's primer will never again touch another one of my models. It appears you must constantly be shaking the can. If you forget, splat! There's got to be another primer out there to use instead of taking this risk.

I used Polly Scale's NATO tricolor paints for the camouflage. I wanted to try Tamiya's new NATO tricolor paints but they hadn't arrived in my local hobby shop by time of this writing. One note about the tricolor scheme, it appears to be a "hard" pattern camouflage, especially at 1/35 scale. However, on the real vehicles up close it is a feathered soft pattern, but just painted very tightly by good equipment. I choose not to mask it for two reasons. Once washed and weathered, I think a soft demarcation actually looks better. Also I did not want to mask this model and risk breaking and pulling off the details. (OK, you caught me, that is the real reason!) I then gave the model a coat of Future floor wax (with the airbrush), then applied the decals. After the decals had dried, I hit it with Future again to seal the decals then applied Dullcote for a nice, flat finish. I proceeded to weather by dry brushing lightly and washing with burnt umber oils diluted with white thinner. After all this dried, I dusted it up with pastels. I must note that I popped the wheels back off and removed the tires from the wheels for painting. I hit the tires with a light mist of flat earth/flat black to deaden the rubber plastic shine.

The Revell Fuchs does build up nicely and is greatly enhanced by Eduard's photo-etch kit. The kit does have some problems due to odd plastic, sometimes inadequate molding and engineering with very poor instructions. Yet, all of these problems can be easily overcome with modeling skill and good reference photos. You'll be happy with a Fuchs to add to your plastic KFOR collection. I recommend the kit and the Eduard photo-etch set.

—Fred Schwarz

so I did not fill in the gaps, your call.

• In step 2, if using the photo-etch exhaust shield (PE part 2), be sure to bend it long ways down the middle, refer to photos to see how it looks.

• Be careful at step 3 when putting on the smoke grenade dischargers. Refer to source photos, they go as shelf (almost perpendicular to the hull). The instruction drawing looks to me like they want to put them on flat against the hull and I did so. Every time I looked at it I said "something ain't right" as if fired the grenades would have landed in the dirt. I had to break them off and place them correctly. Eduard gives some nice covers with chains for the launchers, by the way.

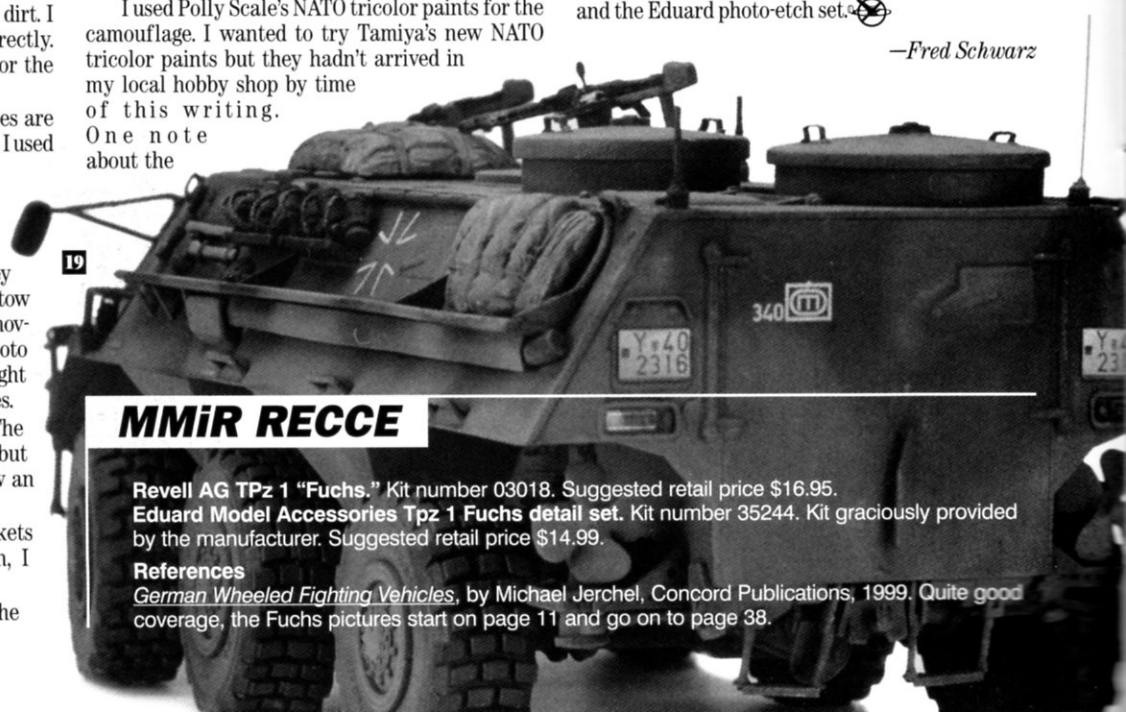
• Tools: replace them if you can, as the kit ones are poor. The picks are OK but the shovels are poor. I used the kit shovel handles with the Eduard blades. They look nice. I used the photo-etch brackets where I could too.

• Step 28 shows incorrect tool placement. I goofed and followed the instructions and they show (from top to bottom) shovel, saw, shovel, tow bar. But from pictures the actual sequence is shovel, shovel, and saw. I even had the dad-burn photo in front of me when I did this and noticed it right as the super glue hardened; Murphy still thrives.

• There is more tool goofiness in step 30. The instructions show correct tool placement but some pictures of vehicles in the late 90s show an alternative. Check your sources.

• The photo-etch set gives replacement brackets for the tow cable. For my mental health, I passed on those.

• I wish Eduard would have given straps for the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MMiR RECCE

Revell AG TPz 1 "Fuchs." Kit number 03018. Suggested retail price $16.95.
Eduard Model Accessories Tpz 1 Fuchs detail set. Kit number 35244. Kit graciously provided by the manufacturer. Suggested retail price $14.99.

References

German Wheeled Fighting Vehicles, by Michael Jerchel, Concord Publications, 1999. Quite good coverage, the Fuchs pictures start on page 11 and go on to page 38.

Well, Isn't That Special Air Service

Tamiya's Willys Gets a Desert Makeover

In February 1940, the U.S. Army Quartermaster sent out bid invitations to 135 American automobile manufacturers that specified requirements for a new lightweight vehicle. Only three—American Bantam, Ford and Willys-Overland Motors—responded. Ford delivered 1,500 General-Purpose (GP, thus the word 'jeep') vehicles and Willys came in with 1,500 Willys MA's. As a predecessor to the MB, the MA is easily recognizable by the headlights positioned on the front fenders rather than behind the grill. After extensive testing, some of the Ford innovations were ordered into the Willys design and by the end of the war over 640,000 Jeeps were serving in every theater of the war. A few of these reached the Special Air Service units operating in North Africa, who modified them extensively for their covert—and fantastic—operations against the Axis forces.

The Tiger is perhaps the only vehicle to receive more aftermarket attention than the Jeep. When Tamiya introduced their all-new kit three years ago, a barrage of detail parts, conversions and accessories was launched. No matter which type of Jeep you're building—and there are plenty of variants—you can find the suitable amount of extra goodies.

In the beginning

This is the first non-German project I've undertaken for the hallowed pages of MMiR, so it seemed only proper to go the distance. There aren't a whole lot of photos of the SAS Jeeps, but research indicates that no two were alike. This grants a limited degree of artistic license. These desert vehicles had to be heavily armed, loaded with fuel, water and ammo, and ready for long-range missions across the desert sands. The Wheel Nuts reference has some gorgeous full-color photos of restored Jeeps in SAS configurations.

Tamiya's newer Jeep was the obvious platform for this project. Eduard released a detail set for the SAS Jeep and it's designed for the older SAS kit which Tamiya released in the 1970s (#35033); still, there are Eduard SAS-specific parts which work just splendidly on the later model. Aber's fantastic treatment of the standard Willys is also a must. VP produced a Jeep detail set designed for the old Italeri kit, but again there are some useful goodies there. They also came out with the SAS conversion designed for the later Tamiya Jeep and it alone contains the Vickers 'K' machine guns and other necessities. So with these four items in hand, it's off to the races.

Gitcher motor runnin'

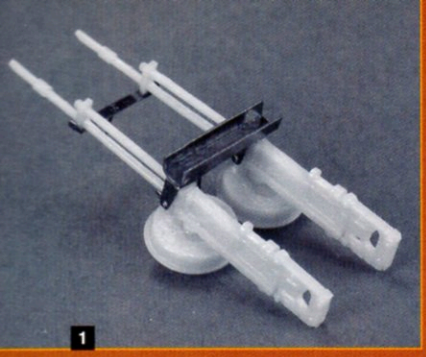
The main frame was assembled easily. The front grill was modified leaving only two verticals, a popular method of increasing airflow to the radiator. A large chunk of the detailing time went into the engine. Thanks to the Wings & Wheels reference, modelers can have a field day detailing the little engine that could. Tamiya has produced several of the upper engine components as a single unit; careful cutting will separate them and allow for additional detailing. The resin condenser and carburetor from VP's Italeri upgrade was installed then came the Aber parade. Wow—the photos reflect the outstanding job Aber has done on this kit. Items such as the fan blade, battery terminals and brackets, hose clamps, radiator cap and headlight brackets with wingnuts are all from Aber. (In the real world, the headlight brackets could be loosened, allowing the headlights to flip upward 180 thus providing illumination when working on the engine. But you probably already knew that.) Next came a plethora of nuts, bolts and wiring, carefully watching the Wings & Wheels reference. The engine compartment was topped off with a piece of Minimeca stainless steel wire, forming the brace between the radiator and the firewall.

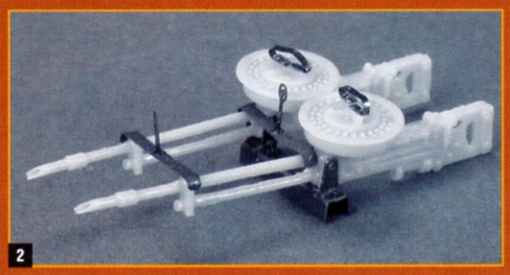
Down under

There's not much detailing on the underside of the vehicle, thanks to the fine job Tamiya did in its manufacture. There are, however, two areas that really needed to be addressed. Muffler clamps were added from lead foil, along with scratch built toolboxes inside the rear wheel wells. These were fashioned from sheet plastic and repeatedly test fitted. Scrap bits of photo-etch were used to create the taillight guards inside the wheel wells. As it turned out, these aren't even visible. But hey, I'll know they're in there.

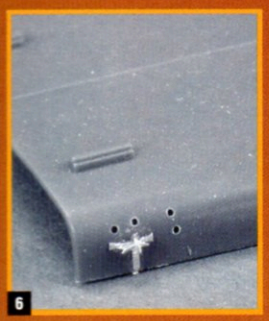
Department of the interior

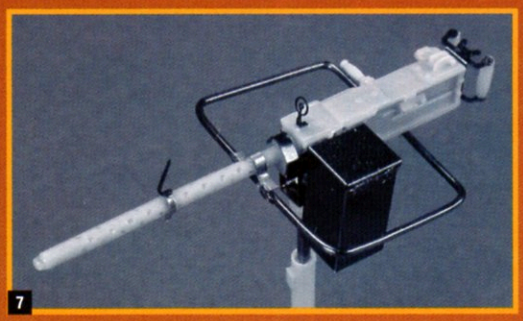
With a model this small, I decided to get all the interior details finished to avoid knocking off exterior fixtures while handling the vehicle. The dashboard got a complete makeover. The plastic dash was sanded smooth, and Aber's replacement stepped in with acetate gauges and open glove box. The gauges were painted white on the reverse side before installation. A punch and die provided plenty of knobs mounted on fine brass wire. SAS units used a Bagnold sun compass, as the magnetic fields of the deserts caused standard compasses to give false readings. The Eduard set provided the sundial. Aber

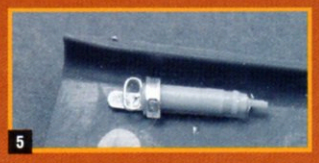


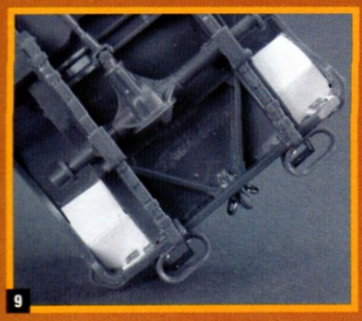


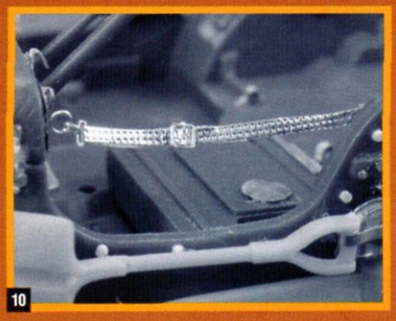
1. VP's twin Vickers with Eduard fixins. 2. Up top, the front and rear sights plus Eduard's thoughtful straps for the ammo drums. 3. VP's auxiliary condenser all dressed up for the front bumper. 4. Stowage added to the rear of the driver's seat. 5. A little ditty from the parts box was used for the grease gun, along with Aber details. 6. Aber's hood latch. With the windshield removed, the windshield latches were often removed as well, so holes were drilled to show their position. This little detail was found in the Wheel Nuts reference. 7, 8. VP's .50 cal, dressed up with Eduard parts and spares. A photo in Osprey's Long Range Desert Group shows a .50 cal with a field mod bracket, presumably for hanging on at high speeds. 9. If you're Jeepin,' don't forget to fill in those tool boxes in the rear wheel wells. Just visible are protective brackets for the taillights. 10. Aber really goes to town on the safety straps. Embossed paper from a cigarette pack was used for the canvas strap. 11. Aber's bracket for the canvas top. Although the SAS ditched those tops, this particular bracket was welded on and thus wasn't removed during the SAS refits. Also visible are the rivet details added to the body and grab handle. 12. Eduard's twin spare tire mounts, along with the spruced up towing pintle. Aber provides the optional cover for the right rear taillight. 13. Passenger side rivet details, plus an Aber/VP jerry can arrangement. Also visible is the twin Vickers forward of the dash. 14. Aber's rear seat latch plus an auxiliary fuel can rack from Eduard. 15. Oh my. The dashboard is a real party. Replacement dash, acetate gauges, and glove box from Aber. Knobs are brass wire and punched plastic. Sundial and floor mats from Eduard. Note the properly cocked accelerator, along with the fuel cap, which was punched from lead foil. The VP SAS set is the only one with the perforated vertical braces beneath the left and right sides of the dashboard. (Special thanks to Gordon Stronach, who designed that set.) 16. Wire valve stem added to the front wheel. 17. Side shot of the blackout light guard and the hinged brackets for the headlights, along with the wiring. 18. Resin pioneer tools from VP all dressed up with oodles of Aber. You're not likely to find a smaller part than the tiny brackets for the canvas straps. Also visible are the left bracket for the windshield, and the bracket for the mirror. For obvious reasons, the mirrors were removed for SAS operations.

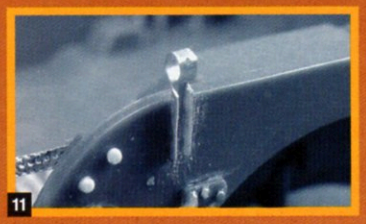


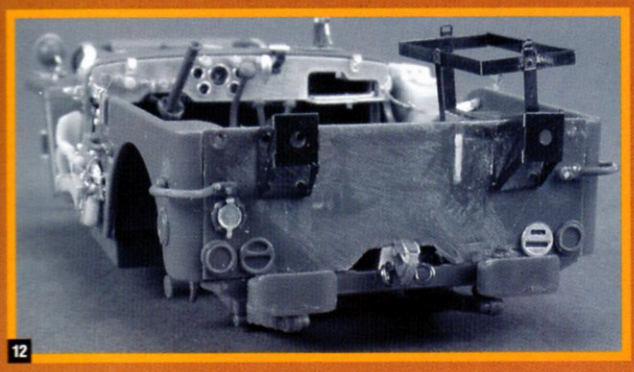


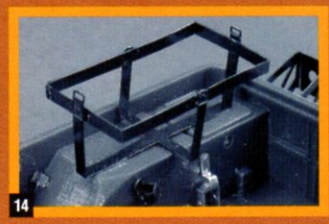


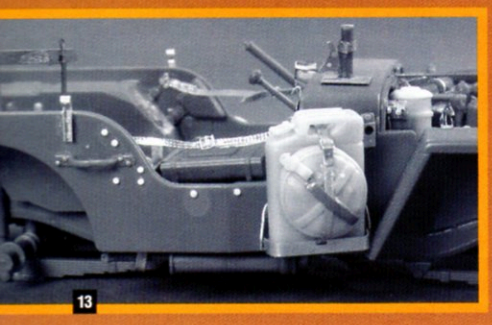


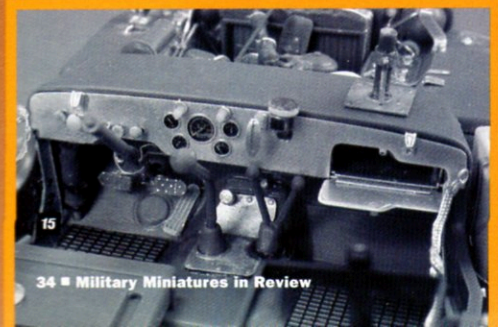












does a superlative job on the safety straps, with minute hooks, buckles, and catches. Embossed paper from a pack of cigarettes was used for the canvas straps. Careful attention was also given to the floor, foot pedals and shifters, and a starter knob was added up above the gear levers. Interestingly, all these detail sets completely ignored the fuel tank. Wings & Wheels provide splendid photos, including shots of the unique telescoping spout. Lead foil was used to tweak the fuel tank braces and a spout cover was punched out and installed. Floor mats are found in the Eduard set.

Moving backwards, there are all sorts of nifty details to address. The canvas flaps on each seat were drilled with a pin vise, creating the rivets where the seats attach to the frame. The passenger seat front legs were pared down, as they actually hinged inside the floor to facilitate egress from the rear seat. One fuel can rack from the Eduard set was added and small locks were drilled into each of the wheel well toolboxes. Small bumpers were added to the forward faces of the wheel wells, presumably where the seats rocked back against them. Aber provides some nifty details for the floor braces and rear seat floor latches. The seat latches require careful carving of the kit, which only has plastic blocks.

We now take you back outside

Aber provides a ton of parts for the windshield, most of which will wait for another project since the SAS apparently removed all their Jeep windshields. Still, the windshield brackets were added to each side, along with the bracket for the rearview mirror—without the mirror. Minute latches were added to the forward sides of the hood (everyone's chief complaint about the Tamiya kit). Some reference photos show SAS vehicles with the windshield latches removed, leaving only holes around the hood latches; so these holes were drilled using a pin vise. Rivets were punched from sheet plastic and added to the four large grab handles, and were also lined up along both outside rims of

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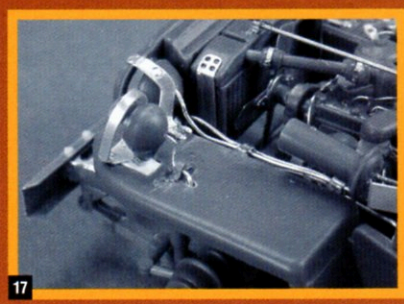
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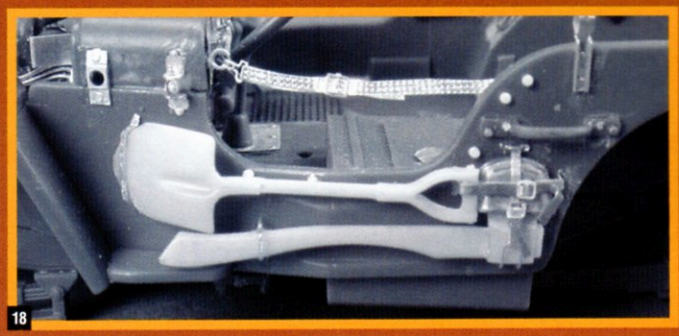
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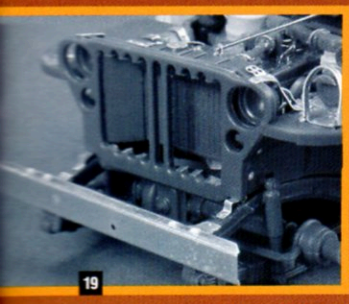
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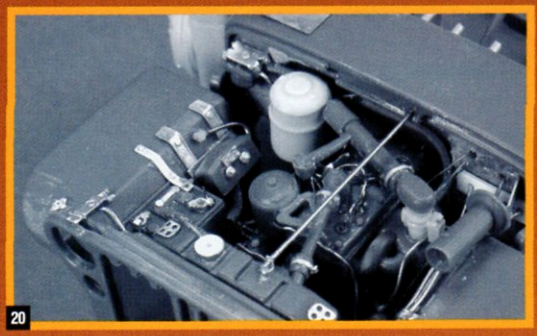
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the driver compartment. I had a choice of several photo-etched replacements for the rear bumpers; I chose to leave the plastic ones in place, and scored out the middle section. These were more like a large "C" attached to the Jeep, rather than the enclosed "O" shape found on many kits. Rivets were again added to the inside of these bumpers. The towing pintle was dressed up with Aber parts and loops of copper wire. Aber provides the proper option to the right rear taillight. It's Aber again for the forward fixtures to the canvas top. Though tops weren't used by the SAS, these were riveted/welded in place and are visible in many photos. The rear brackets for the canvas top—which were also left on the SAS vehicles, mounted just above the rear wheel wells—weren't used, as they were to be covered with stowage.

Many SAS Jeeps mounted two spare tires on the back, and the twin brackets from Eduard were used. VP provides a resin casting of a Tamiya wheel in their SAS update; so twin spares were mounted up. Valve stems from copper wire were added to all six tires. The front bumper was replaced with the Aber version and Aber again comes through with mind-numbing details for the front bumper brackets. VP's auxiliary condenser—a brilliant desert innovation that was later added to many Jeeps in the ETO—was dressed up with lead foil, copper wire, and a Grandt Line bolt and set aside for the painting stage. I puzzled for a while over the hood; I wanted to use a working Aber hinge, but also wanted to install jerry cans SAS-style on the hood. Obviously, the hood couldn't be raised with 120 pounds of liquid strapped on. I finally opted to mount the fuel cans and make a lift-off hood to show off that engine.

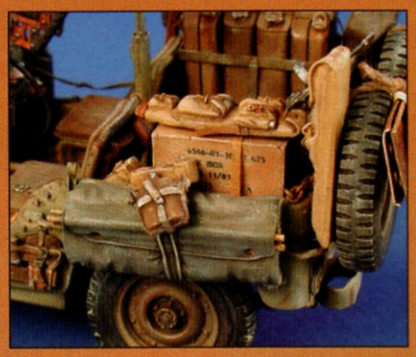
The pioneer tools are a real party and Aber provides some of the tiniest parts known to man. There's a great photo of the finished assembly; 18 parts total are in the pioneer tools and fixtures. The final assault was on the weapons. VP's twin Vickers was dolled up with Eduard brackets and sights and set aside. Eduard also provides parts for the canvas straps found on the Vickers ammo drums. The .50 cal was completely built on its mount, using VP's MG with Eduard details and ammo box. I came across a photo showing one desert jeep with large braces welded on, presumably to turn the weapon and hang on at high speeds. Lead foil mounts and copper wire was used to fashion this device.

Stow, stow, stow your stowage

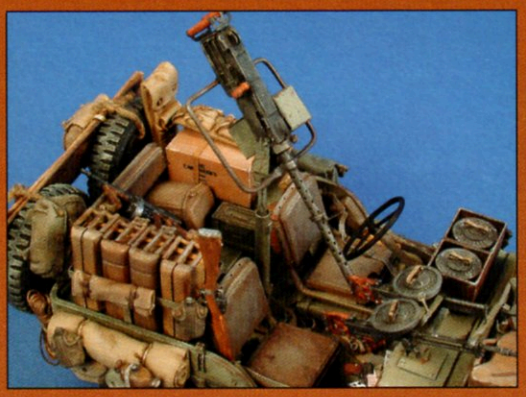
The most enjoyable phase of the project was picking out the stowage. I wanted to show a fully loaded SAS Jeep, but didn't want to cover up too many of the details. Fuel cans, weapons, crates, bags, canteens, bedrolls, boxes and ammo cans were all selected and test fit. Resicast has produced an outstanding British Infantry Equipment set (#35528), from which the British canteens, packs, ammo pouches, Webley holster, and machete were taken. Dragon's WWII Allied Infantry Weapons (#3815) supplied the .303 and Thompson. The perforated sand channels used for getting 'unstuck' are from the Eduard detail set. Hudson & Allen chain was wrapped around the spare wheel mounts and shipbuilder's rope was coiled and stuffed into one of the grab handles. Only a handful of pieces are 'laying around' as if the occupants have just stepped out, everything else is lashed into place. The role of SAS operations dictated that equipment had to be necessary and accessible. An assembly line process was used to paint all the gear, using acrylic base colors with oil paints for washes and highlights. At this juncture the Jeep boasts 277 additional detail parts plus 79 pieces of stowage and gear.

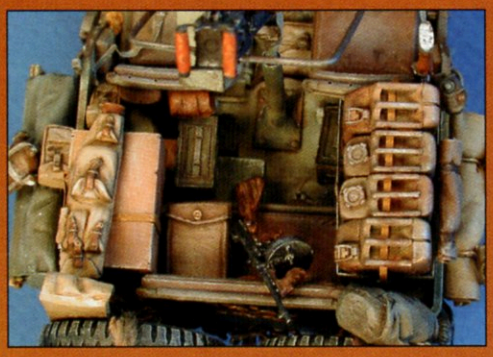
The painted desert (jeep)

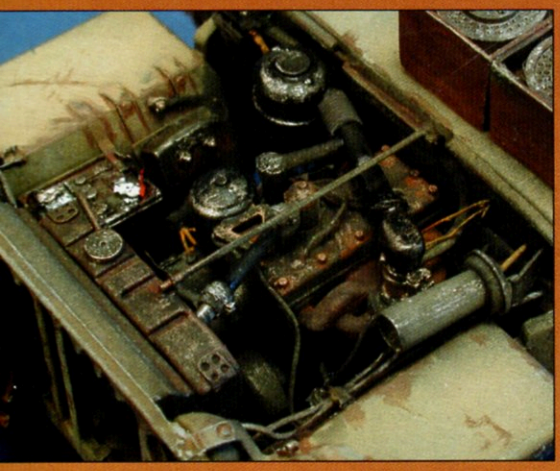
Heading for the airbrush station, the Jeep was comprised of several subassemblies: the Jeep proper, three seats, two major machine guns, condenser, hood, six wheels, and steering wheel. Everything was lightly spritzed with Krylon White Primer out of the can, then airbrushed with a mixture of Tamiya Flat Brown/Flat Black. The uppers were then airbrushed with Tamiya Buff, gradually lightened with white. This was my first attempt at airbrushing dark to light in the manner used by our distinguished editor, and I was quite pleased with the shading results. Plus, the vehicle had a dead flat, roasted in the sun look. The next day I applied thin washes using a variety of artist oil blacks and browns. (I also discovered that I had failed to mask off the



19. Modified grill and Aber details for the front bumper. Note the tiny brackets on the bumper mounts. 20, 21. There's a lot of lovin' under the hood. Aber noticed some amazing details, such as the battery bracket, hose clamps, and two-part fan blade. The Wings & Wheels reference gives you all the photos you need to party down on the Jeep engine. All told, over 80 detail parts were added under the hood. THE OVERALL SHOTS: I'm taking a little chance here and not doing detailed captions on these. I figured that there is enough explanation in the text and the in-progress photos. I hope you enjoy looking at it as much as I enjoyed building it!







gauges in the dash. Testor's Lacquer Thinner and a small, stiff brush cleaned 'em right up and caused no harm to the acetate. Good for future reference.) Next came a wild ride of canvas, metal, and wood painting, maintaining khaki tones while providing a bit of color variety to the vehicle. The rear taillights and reflectors were filled in with Tamiya Clear Red, and the headlight lenses were affixed using Testors Clear Parts Cement. The red lenses were then scrubbed over with paint, and canvas covers for the headlights were made with tissue soaked in diluted white glue. Flat Black enamel, silver printer's ink and Raw Umber/Burnt Sienna oils were mixed and carefully applied for a dark metal wear. SAS markings were minimal or non-existent, and mine is bare of markings. The finishing touch was careful application of dust colors to the lower areas.

This is the smallest 'dream machine' I've done to date, and the finished model is about three times the weight of the original kit!

—Joe Porter

MMiR RECCE

Tamiya Jeep Willys MB 1/4-ton 4x4 Truck. Kit number 35219. When it comes to Jeeps, this one's the bestest and the brightest. Retail price $16.50.

Aber Jeep Willys MB Update Set. Set number 35057. Designed for the newer Tamiya kit. No matter what type of Jeep you're building, buy this. Retail price $18.49.

Eduard Model Accessories SAS Jeep Detail Set. Set number 35185. Designed for the older Tamiya SAS Jeep #35033, but there are details here you won't want to miss, such as the compass, fuel can racks and Vickers details. Retail price $14.99.

Verlinden Willys Jeep Superdetail Set. Item number 1275. Not a must have, as it's designed to fit the older Italeri Jeep. But the engine is a work of art if you're heading that way. Retail price $16.45.

Verlinden SAS Jeep Detail Set. Item number 1434. This is where you'll find the twin Vickers 'K' machine-guns, auxiliary condenser and plenty of nice stowage. Designed for the newer Tamiya kit. Retail price $20.85.

Collectors interested in purchasing this model can contact jporter@cosmicbovine.com

References

Jeep in Detail: Willys MA & MB in the First 50 Years of Service Wings & Wheels Publications, Special Museum Line No. 5, 1999. Don't even think about detailing a Jeep model without this book. It's packed with photos of Jeep details both inside and outside, and the engine shots are fabulous.

Jeep Willys MB/Ford GPW. Wheel Nuts, 1998. A marvelous full-color photo book of Jeeps at the Beltring shows. Photos 96 through 105 are the SAS version. You'll need to wear a bib to catch the drool.

The Special Air Service. Osprey Men-at-Arms #116, 1981. A fine resource detailing the heroic exploits of the British Special Air Service.

Flak 'n Famo

Creating the 8.8 cm FlaK 37 Selbstafahrlafette (auf 18-ton Zugkraftwagen

Part One

This is the first of a two-part article in which Tony Greenland details his odyssey of scratch-building and converting the Tamiya FAMO. This article was so detailed and extensive, we decided it would be best to present it in two parts.

In the early years of World War II, the deadly 8.8cm FlaK 18 had been successfully mounted on a half track vehicle, although in this case it was the 12-ton version (SdKfz. 8). It also featured elements of armor protection, but as was usual, the crews were largely unprotected. Its role was against ground targets. In the early blitzkrieg days, the Luftwaffe had complete air supremacy and therefore the gun was not required for its original purpose of anti-aircraft defense.

By the autumn of 1942, especially in the North African campaign, the German Heere were losing substantial amounts of men and equipment through allied aircraft attacks. Urgent action was required, and the Waffenamt responded in the late autumn of 1942 by reporting that the 8.8cm FlaK 37 could be immediately mounted on the 18-ton half track (SdKfz. 9). The first experimental vehicle was available shortly, although from an order of just over 100, only 12 were completed from July to September 1943. By now the war in North Africa was lost and the Southern Front was being fought in Italy. The twelve vehicles were to outfit the first and second heavy batteries of Heere FlaKartillerie Abteilung (Sf) 304, which was attached to the 26th Panzer Division and fought exclusively on this front.

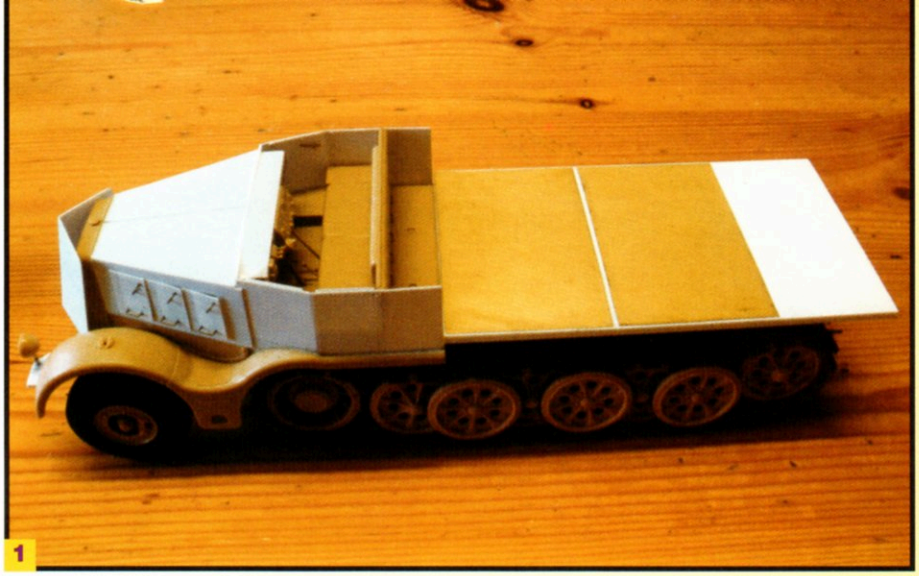
Following Tamiya's FAMO release in the New Year, it would be inevitable that variations on the standard version would appear. This impetus would be accelerated by the publication of *Nuts & Bolts*, Number 12 on the FAMO. Scale drawings are always the catalyst for modelers to try their skills. However, they should always be treated with caution and skepticism when there are no surviving vehicles to measure from, or manufacturer's drawings are also lost. There are, to my knowledge, only two surviving photographs of this monster. One, a side elevation, and the other a nice three-quarters, front elevation. The side elevation 88mm has no shield, whilst the three-quarters shows a variation on the standard 88mm. There is a version of this gun in a private collection that the *Nuts & Bolts* team was fortunate enough to photograph. My model is no more than my interpretation of these two photographs and now that it is complete, I can identify many errors. I will attempt to describe these, such that potential converter/scratch builders can avoid my mistakes.

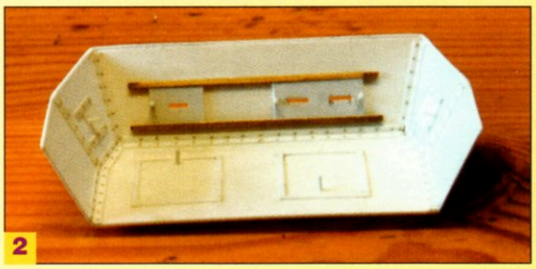
It is important to have the best rendition of these two photos. The most important is probably the three quarters, and the best print I have found is in the *Panzer Tracks No 12* by Thomas Jentz and Hilary Doyle, published by Darlington Productions. A lot of detail that is obscured on poorer quality reproductions is visible on this print.

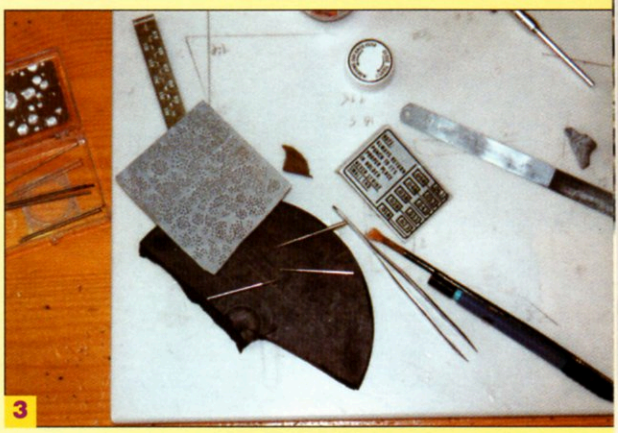
The scale drawings of both Hilary Doyle and John Rue contain understandable errors. With regard to the FlaK weapon, the side elevation photo supports the 36 version, but as the use was in an anti-aircraft role, it should have been the 37 version. Surviving FlaK 18's and 36's are extremely rare. Their use in ground warfare was very heavy in the early years, before they were superseded by PaK 41/43's and 43's. They remained, however, potent anti-aircraft weapons until the war's end. I have frequently called upon the Duske/Greenland archive for certain details, which tended to be in common use throughout the war. Two examples are the drop down sides and the internal detail of the armored cab. The latter, for example in my model, is based upon the surviving 7/2 in Saumur.

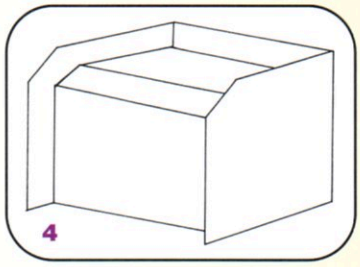
The single biggest dilemma facing any modeler is the low profile of the 88mm. John Rue's drawings show the pedestal mount fitted to the bottom of the chassis frame. John has no proof of this and as he has admitted, it is only his interpretation. I do not personally support this theory, as, in addition to the pedestal, there is an enormous amount of equipment which would also need to be in a circular recess, for example, the left hand fuse setters, right hand operator's seat, etc. In order to rotate the gun 360 degrees, this recess would need to cover a large part of the fighting platform. Whether I am right in purely reducing the pedestal height is open to discussion. John Rue's opinion is every bit as valid as my own. However, I can see no logic to this recess; the recoil forces from a gun firing at high elevation impose far greater downward stresses than a horizontal-firing gun. To some extent, the four outriggers this vehicle carried mitigated the forces.

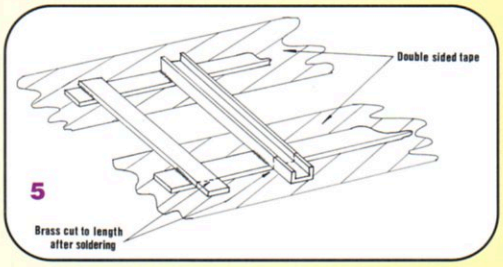
It is not the intention of these articles to give a blow by blow account of this model's construction. There are too many unknowns, and, as will be seen, some of my interpretations are quite clearly

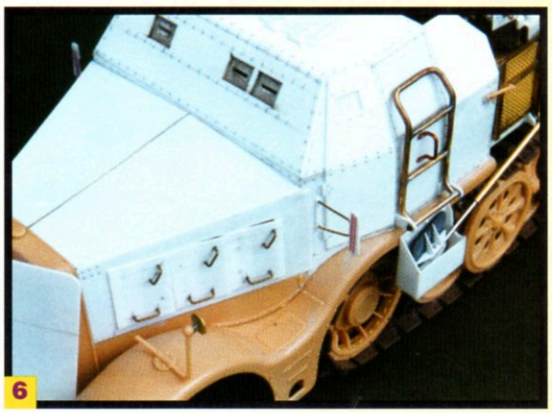












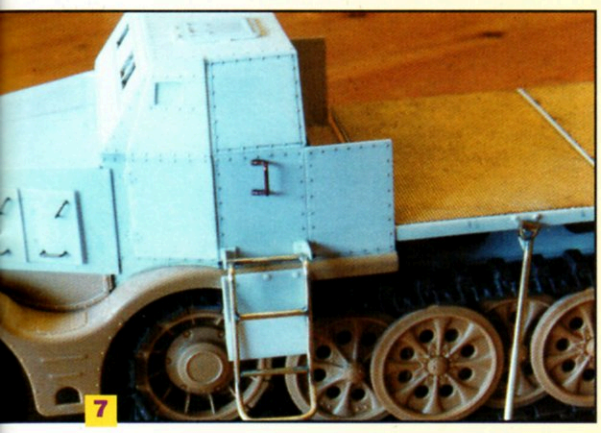
wrong. Equally, the opinions of my more learned colleagues, i.e. Hilary Doyle, John Rue are also suspect in places. For those undertaking the full project, I would recommend the use of John Rue's drawing numbers, as found in *Nuts & Bolts number 12*. However, the drawings should be increased by exactly 5% to match the Tamiya Model. In order to accomplish this model, certain modeling techniques are essential and these will be given, in addition to the basic information of construction. Using all the materials and references that I included will inflict severe damage on the credit card, to the order of $200. However, it also gave me three to four months' entertainment!

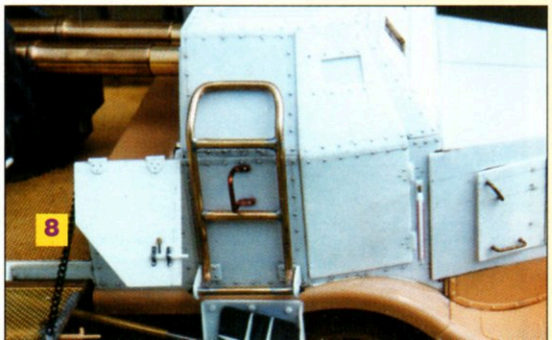
Construction

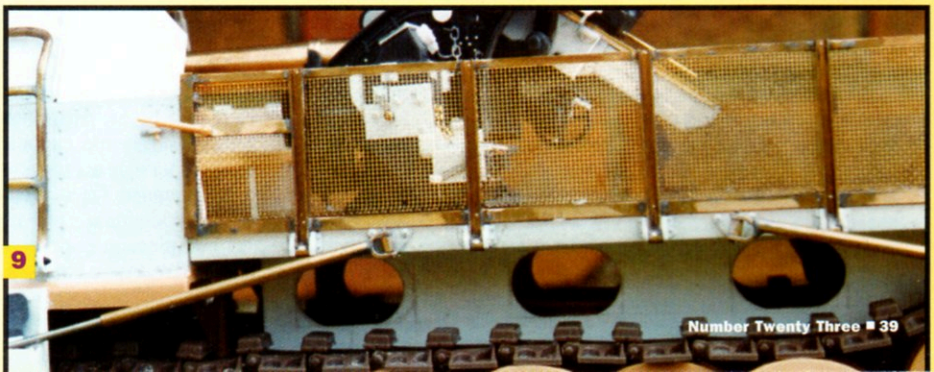
The main purpose of these articles is to illustrate two or three main modeling skills that are essential to develop, if a model like this is to be built. They concern fine detailing, soldering and vacuforming. Mastering of these three ingredients should lead to a vastly improved model.

The FAMO

All steps in the Tamiya instruction booklet should be followed up to stage 15. Stages 12 and 13 are suspect as to whether this vehicle carried the winch. The side elevation photograph appears to support this contention, and therefore I included it. Stage 15 is my first major divergence from John Rue's drawings. His plans appear to show a solid front radiator. This I cannot agree with, as all combustion engines require cooling and the FAMO was no exception. I believe it carried the standard radiator/front (part D19). The V-shaped armored plate found commonly on this type of armored half-track also protected it. Install parts D19, E33, E41 and D1. Do not install the front bumper (E42), but construct in plasticard the headlight base supports. Construct stages 16 and 17 as described, but omit F18 and B4. In stage 17, cut the rear floor of F19 back by 13mm. This is just on the driver's side of the locating strip for part F18. In Stage 18, only install parts D17 and 18. With regard to the triangular supports, B44, only install the two closest to the cab. Clean off the locating strips of the back two. Stage 19 should be fully adopted (except F23). Stage 20: attach the partially assembled cabin and front bumpers/radiator to the chassis. Glue D21 and D20 into position. Ignore the scale plans and, taking careful measurements from your model, construct the side and top hood of the engine compartment. On the radiator (D19), D15, D20 & D21 are ledges on which 0.5mm plasticard can rest. Using Rue's drawings, now construct the rest of the cabin. Make the roof section separate, but do not glue into position. Due to the shear size of this model, you will be surprised how much of the cab interior you can see. Therefore, it needs careful attention and painting prior to the gluing of the cab top. I left my cab top off for too long and suffered the usual problem of plastic shrinkage that took a great deal of effort, hair dryers and cursing to finally fit. After the cab area was completed, I only installed item D23 (x2) and D28, and 29 in stage 22.







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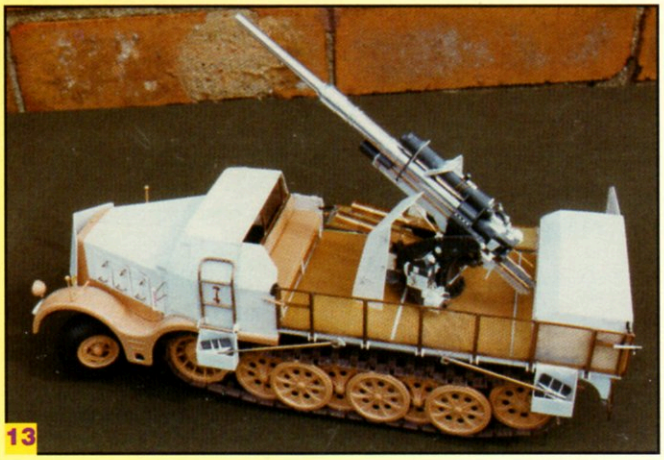

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1. The kit prior to the addition of the gun and its related equipment. I have added the new top hood and radiator, and the basic structure of the gun bed. 2. This is the finished cab interior. Quite a bit of it can be seen, so careful attention to detail was necessary. 3. My basic set-up for creating the bolts mentioned in the text (see the text for a complete explanation of figures 4 and 5). 6. Some of the various handles are visible here, all made from brass wire. The large side step is also seen. This assembly was constructed with soldered joints. 7. The step folded down. 8. An identical step is mounted on the opposite side. 9. The mesh on the side skirts is an Aber product. The fine woven texture of the material could only be properly cut using an industrial razor blade as a guillotine! 10, 11. These two photos show the side braces set down to stabilize the gun platform. These were, again, soldered. The assemblies were left workable for ease of painting. 12, 13. The completed kit with the gun mounted. The construction and detailing of the gun is covered in the part two. 14-16. Detail views of the finished kit. I chose a hard-line camouflage scheme, which was created with masking fluid. This is also covered in-depth in part two.

provide any useful purpose and probably did not exist, I would suggest it be omitted.

The next two parts cover two major facets of this article, the installation of bolt detail and soldering. Many readers will willingly accept the first and show extreme caution to the second.

Readers will observe that this model has numerous small bolts. This was a common practice of all the WWII combatants, to use bolted technology to join two or more pieces of metal. It is therefore essential to be able to adopt modeling techniques that can recreate these bolts in a variety of sizes. For the larger sizes, a number of manufacturers offer their products, Grandt Line being perhaps the most famous. However, in very small scale there are no suitable products. The technique I suggest is not only extremely cheap, but also repetitious, making sure all the bolts are identical. You will need three pieces of equipment. The first is a piece of very dense rubber, vulcanized is the best. I use a discarded piece from a cottage industry manufacturer of white metal models/figures. A piece only a few square centimeters is sufficient. Next, the smallest burr from a motor drill. If you are prepared to waste three, then you can have three different bolt sizes. Hold the burr in one hand and, with a pair of pliers, snap off the burr head. Carefully file the end to give a flat circular head. The more you file down, the larger the bolt size will be, and with three burrs you can have three bolt sizes. The consumable part of the process is the printer's aluminum *[used for making printing plates—Ed].* Get the thinnest you can. Simply stab the burr through the aluminum into the rubber. Allow for 50% waste (you lose them everywhere!) You need to invert the bolts from the rubber. Do this with a pair of the highest quality tweezers. You are now ready to install the bolts.

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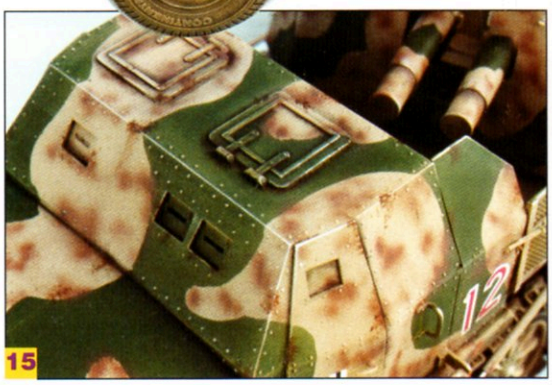

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The next step is to construct the two large I-beams that supported the fighting platform. The external dimensions were 15mm x 3mm. This assumes a fighting platform depth of 3mm. The beams were glued to the chassis frame and finished flush with the end of the frame. If you install the winch, you will need to have a cut out on the left rear I-beam. You will need to install a tread plate on the flatbed. I used Accurate Armour's etched set D06. These are priced at around $10.00 for a reasonably sized sheet. Leaving a border of 1mm around the perimeter, cut the etched brass to size. In these situations I use epoxy glue. It is certainly true that it is a messy process. However, it does give you time to accurately position the floor plates. Within half an hour, using a wooden cocktail stick, remove any surplus. After a period of hours this would be impossible, but shortly after the glue sets its ability to adhere is limited.

The single biggest error was the rear ammunition stowage box, which all three of us appear to have misunderstood. See **figure 4** for my interpretation, which is now nearer the truth. The other piece of work that may be redundant is the rear guardrail, which, when opened, provides no meaningful access. Therefore, as it would not appear to

There are two basic methods, dependant upon the material you are applying the bolts to. If it's plastic, then plastic solvent will do; if the material is not plastic, then use fine artist's clear vanish.

Bolts on plastic. The first step is to know how many bolts to install in one line. Measure the distance and calculate the gap between each bolt. Do not use independent measurements, cumulatively add the differences, otherwise errors in measurements will be compounded. Once you have marked out the positions, individually pick up the bolts with tweezers and place in position. Once you have placed four or five, take a 00 brush and

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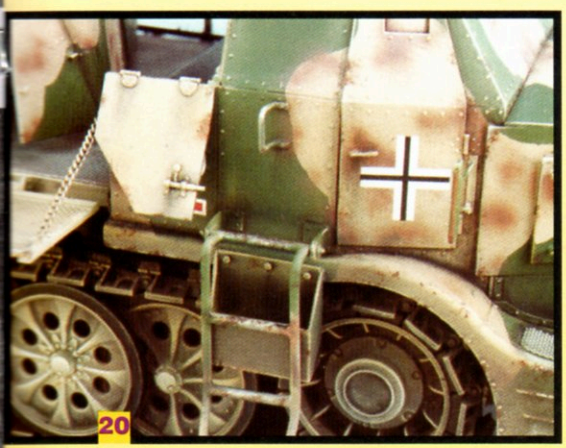

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using strong solvent glue (but with a high capillary action), touch each bolt. If necessary, reposition each bolt on the marked line. This generally is more than sufficient to strongly position the bolts. After completing the line, reapply glue to the bolts. You may need to replace bolts that are on locations that suffer abrasion from excessive handling.

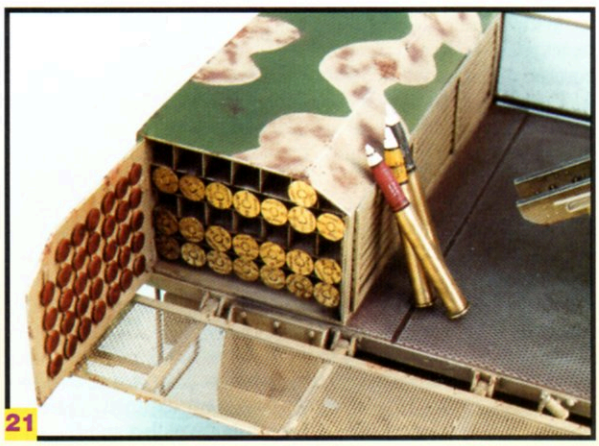
Bolts on other materials. The same principle applies concerning the marking of bolt positions. However, once this is done you should apply a coat of thin varnish (mine is water consistency) to the entire area. This is vitally important if you don't want to leave a tide mark of varnish. Once this is done you have about ten minutes to apply the bolts; therefore, be ready with a sufficient supply. Use your finest brush; with moisture from your lips pick up a bolt and position. Have thinners available to clean the brush, if you should touch the varnish with the brush, then you will never remove the bolt from it. The next day give the area a second thin coat to seal the bolts in. I cannot emphasize how boring and repetitive this is, but it does give the desired results!

Soldering

Soldering offers so many advantages over traditional means of attachment that it should, in certain circumstances, be considered. Its single greatest advantage is strength. The use of glue has severe limitations. Whilst epoxy glue offers similar strength, the amount required around any joint negates the advantages. Super glues has revolutionized modeling, but its one big draw back is its poor shear strength (i.e. you can easily twist or slide items apart) Soldering offers the only practical solution to the joining of several brass parts. Whether it is etched metal or structural shapes, for example, I, T, H beams etc, no other alternative material offers the finesse of brass. Soldering is easy. However, only by careful preparation does it become within the grasp of even the moderately skilled modeler. Essentially, most of the work is done before the heat is applied to join the metals together.

The basic ground rules are to ensure that all brass parts are clean. Use fine grade steel wool to achieve this. Use as powerful a soldering iron as feels comfortable (mine is 40 watts). Use non-fluxed solder. Flux is the medium (acid in this case) that assists the solder in jointing. Basically, leave sufficient brass to facilitate ease of handling. Remember that once soldered you will have a very strong joint that can take pretty rough handling.

Cut your metal to approximate length and apply a small quantity of solder at the point of joining. Do this on the other item. Once they are positioned in place, then apply heat to any adjacent area. The heat will flow to both items. As the solder has a much lower melting point than the brass, this will melt first. Remove the heat and the joint solidifies. This joint can now be cleaned up with any standard abrasive means, from wet and dry to files. This sounds simple and generally it is! The secret is only in the positioning of the items together.



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17-20. More views of the finished model. Although mentioned in part two, I must give another nod to Archer Fine Transfers, who products were used extensively, and with excellent effect, here. 21. The completed ammo bin. Unfortunately, I misinterpreted the plans on this example. A more correct version is shown in figure 4. 22-27. Additional shots of the completed models. Both these and the previous photos clearly show the many small bolts and rivets present on the model. They are hundreds on the model and they are essential for the success of this project.

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With the guardrail on the FAMO, I first drew the exact position of each component on a piece of paper. I then covered the paper with double-sided tape. Onto the tape (see figure 5) I positioned the brass components, already tinned (the expression when the item has its solder but has not been jointed with another). The main frame is now in position. The vertical rails (tinned) are held in position with one hand (not literally) and heat applied with the other. If there should be some inaccurate positioning, reapply the heat and start again. Always apply the flux just before soldering the main joint, it greatly assists in the fusing process. Keep the soldering iron on the brass only until the joints flow. If you leave it too long, then the heat can transfer to adjacent joints and all your work becomes redundant. Once the whole frame is complete, then the cutting to exact size and shape can begin. I use a slitting disc mounted in a power tool to complete this task. Once the soldering is complete, I then thoroughly wash the part in soapy water to remove any residue of the flux.

I encountered special problems with the Aber etched mesh 35 A66. This etched metal has, just like the real thing, a woven appearance. When I came to cut it, even with new surgical blades, I continually pulled and frayed the edge. These are expensive mistakes to make! I only found the solution after I ruined a complete set. My answer was a simple one; use an industrial razor blade as a guillotine. This produced perfect edges that were superglued onto the main frame of the guard rail. There are, of course, lots of details that need adding, but, hopefully, with the aid of the photographs, the modeler can adopt those he wishes and leave others.

—A.J. Greenland

Don't miss part two in our next issue!

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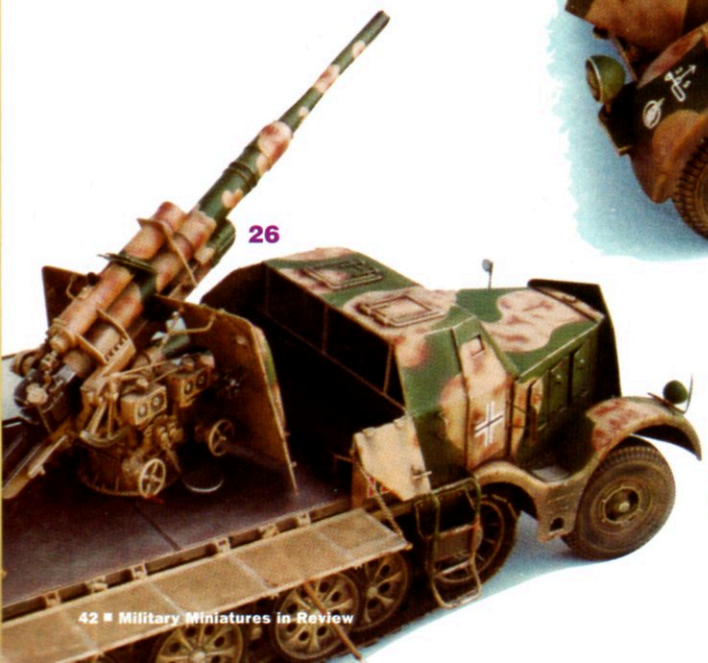

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Deux FT17, Monsieur

French FT 17 & U.S. M1917

The French Renault FT17 first appeared in 1917. It was designed for use in large numbers to overrun obstructions and attack trenches from the rear. The rather obvious rear mounted skid plate was designed purposely for trench crossing. The 6-ton FT rumbled along at 6 mph and was powered by a rear mounted 39-horse power engine. The driver was positioned up front with the gunner in the turret.

There were mainly two types of guns used. One being a 37mm Puteaux cannon with semi-automatic breech that allowed the gun to be operated by one man and the other was a Hotchkiss 8mm machine-gun. The FT was originally designed to be a machine gun tank only, but after some persuasion from General Estienne the gun tank was approved. In 1931, some of the FT's were overhauled and fitted with a new 7.5mm Chatellerault Model 31 machine-gun as part of an update to newer standards.

A round cast turret was used originally, but because it was difficult to manufacture it was dropped after only 100 were produced. A turret of riveted plate called the 'Omnibus' (universal) turret was used after this along with the 'Girod' round turret made from (cast and forged) parts. The later is the turret provided in the RPM kit.

A number of variants were produced or tested. There were wireless tanks, 75mm short gun tanks even a 105mm long barreled gun was tested. Renault's FT17 was soon obsolete, but did return in some strength during WWII.

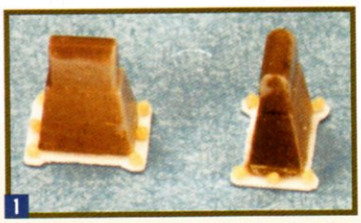
Because of the FT's impressive cross-country performance a number of countries either used or made their own versions of the Renault FT17. The Italian company FIAT produced their version of the Renault FT17 that was designated the FIAT 3000.

The Soviet T18 design was inspired by the Renault FT17and Japan, Poland, Spain, Holland and Hungary just to name a few, also used the FT17. The Germans captured FT17's and used them as well, but mostly in close defense missions.

The U.S. M1917 six-ton-tank

The U.S. used the FT17 to build their M1917 six-ton tank. Three companies were contracted to build this new tank, the C.L. Best Company of Dayton Ohio, the Maxwell Motor Company of Dayton Ohio, and the Van Dorn Iron Works of Cleveland Ohio.

The U.S. tank looked very much like the French FT and is often mistaken as one. Some of the differences include steel idler wheels to replace the steel rimmed wooden idlers of the French FT. A similar but different track-frame, which housed the leaf spring bogie trucks. The upper track tension spring and support spring arrangement is different as well. This was redesigned to be simpler then the French tank.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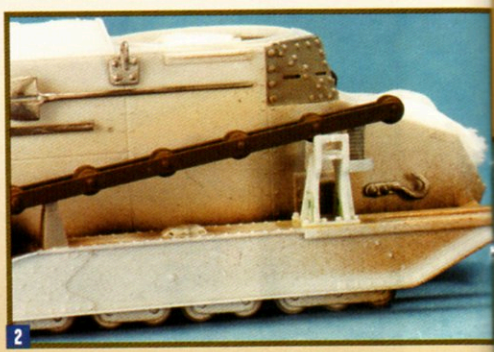
The FT engine was replaced with a Buda HU four-cylinder 42 horsepower gasoline engine. This change put the exhaust outlet on the opposite side of the hull compared to the FT.

The turret differed from the French cast turret in that it was made with flat-riveted armor plates.

The driver's station was much the same as the French tank except for the armor above the driver. This was shaped differently and had two more vision slots then its French counterpart.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On the early tanks, the armament included the Marlin tank machine gun. Later variants had standardized ball mounts fitted with either the Browning .30 cal M1919 machine gun or the American 37mm gun M1916, which was basically the same weapon as the U.S. infantry canon.

By the nineteenth of December 1918, only 10 of the U.S. M1917 six-ton-tanks had made it to Bourg, France. Total production was 952 tanks. Between the wars the M1917 was used mostly for training and for service with the National Guard. A good number of them were shipped to Canada to be used in training prior to WWII. There also was their use by the U.S. Marines as part of the East Coast Expeditionary Force sent to Tientsin China in 1927. These tanks were marked with "U.S. MARINES" in black on the side track-frames along with the Marine eagle, globe and anchor symbol on the glacis. I have seen the eagle globe and anchor symbol in three different ways. Two were in a solid color in actual photographs and the other was from a color plate in the hard to find Osprey Vanguard book on the FT17 by Steve Zaloga. This color plate showed the eagle, globe and anchor

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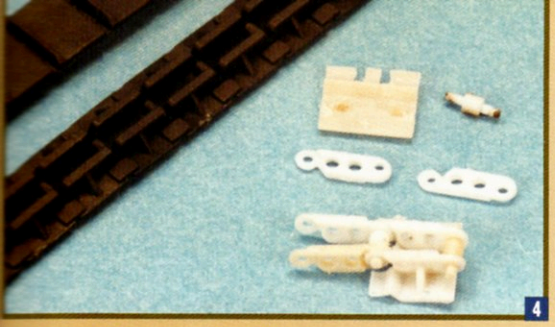
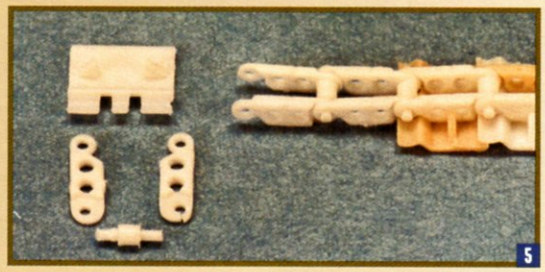




in detailed colors. This is a very good reference on the FT17, but I couldn't find it anywhere.

On to the kits! The RPM's FT17

RPM has put together a very nice base of the FT variants. The light gray styrene's molding is a bit heavy at times, but we like to correct things now don't we? A little scraping and thinning out of parts is what makes life worth living. Aside from some of the pioneer tools this kit is really very nice.

A number of countries are represented in these RPM FT kits. They are really all the same except for the decals. RPM's kit of the gun tank variant, Char Canon FT17, comes with decals for 11 different tanks that cover all the countries shown on the box top. The kit of the machine gun variant, Char Mitrailleur FT17, comes with decals for 5 different tanks.

Included are the Hotchkiss 8mm MG, the 37 Puteaux cannon and the 7.5mm Chatellerault Model 31 MG, so you could make any version you want depending on what markings you want to use. The kit comes with the late round cast and forged turret and this also gives you a lot of flexibility to model a large number of variants.

RPM provides flexible one-piece tracks in the kit. They also offer a separate and very nice set of link-to-link tracks. I was so pleased to see FT17 tracks that weren't full of resin slag or pock holes that I couldn't bring myself to putting any mud on them, and I like mud on tanks especially in the tracks.

On to the build

The FT17 goes together like most other kits, so I won't spend a lot of time on the assembly. Just watch out for the alignment of the hull sides and top. The fit of the hull is really very good.

I tried to thin out much of what I thought was too thick, like the tool handles, track skid, etc.

RPM has you carve rivets off of sprue runners and place them on the turret. The tricky part is that there are no location marks for them. This is really pretty easy with a sharp x-acto blade and a few good reference photographs.

I removed the ridge at the bottom of the turret base, which doesn't need to be done. From what I have read, they were both ways, but most I have seen were without it. I also drilled out the tail pipe on the muffler for added detail.

I found it annoying that the RPM sprues weren't numbered, as I kept referring back to the page with the locating numbers on it. If I did it again, I would make a copy of these pages and have them handy to get to. The instructions are good otherwise.

I corrected the length of the 37mm gun barrel as described in recent article on the FT17 in Military Modelling magazine (listed below).

The MR Models U.S. M1917 six-ton-tank conversion

When you first open the bag with these resin parts you are thrilled to H-E-double hockey- sticks, as the detail is superb and the quality is very nice. There are some things that will calm you down as you get into the build.

Unfortunately, I didn't get a photograph of all the parts in the conversion, so I will try to list them here. The conversion comes with a late production turret, a turret hatch with an antenna and one without an antenna. An U.S. 37mm ball mount cannon, a ball mount .30 cal Browning MG, an upper bow plate, antenna base, drivers visor, and driver's hatches. Also included are the U.S. all steel idler wheels, U.S. track tensioners, Buda engine muffler, lift and tow hooks, suspension springs, rear suspension bracket, beautiful white metal pioneer tools and a resin jack. You won't see a jack in this build, because it wasn't included in my conversion.

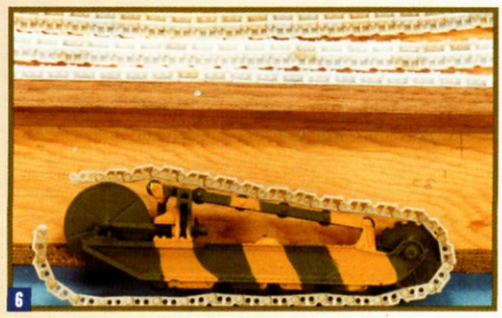
The M1917. Now we begin...

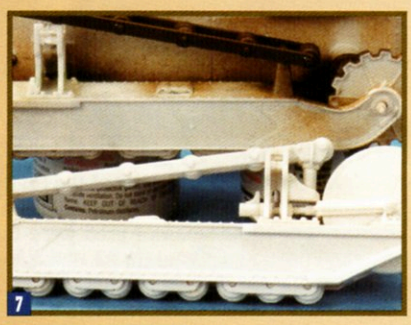
Again, I thinned out certain parts like the driver's laterals, edges of the trench crossing skid, engine cover edges and whatever other parts where appropriate on RPM's end of the build.

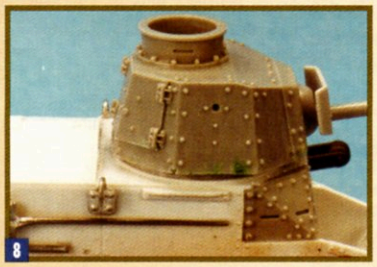
The MR conversion will get you close to an accurate M1917. I say "close" because you would have to remove and reposition a good portion of the rivets on the hull to make a primo kit. They are much larger in diameter then the French rivets and because of the different fittings between the tanks, some are in different places.

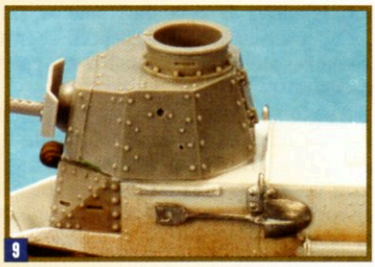
I immediately dug into the track-frames, as this is the most difficult part of the conversion. You have to remove a number of rivets and details to make this part close to being the same as the real thing. The photos I took of a M1917 displayed in Nitro West Virginia were a tremendous help. I don't know how I could have done it without them, as the instructions are good—but not that good.

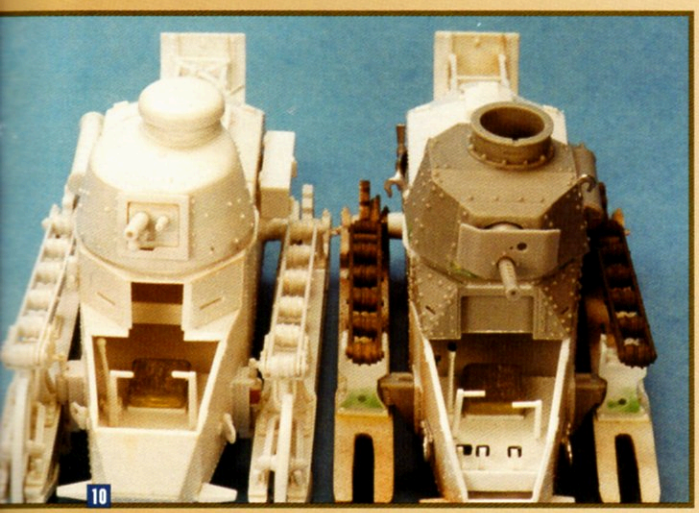
The area that kind of dips down at the rear of the track frame near the idler isn't the same contour as the U.S. part. I scooped this section out deeper as seen in the photos. To do this (correctly) you would have to add some styrene flat stock to

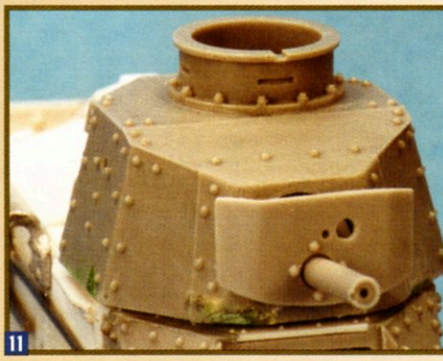






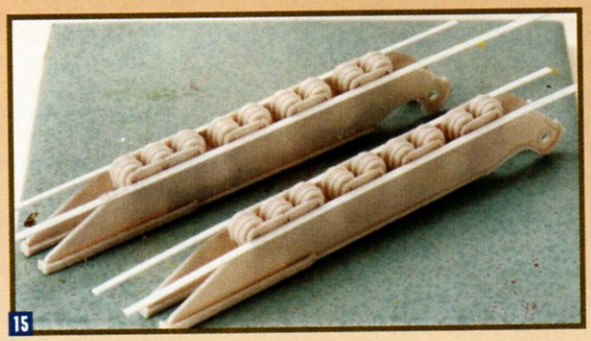


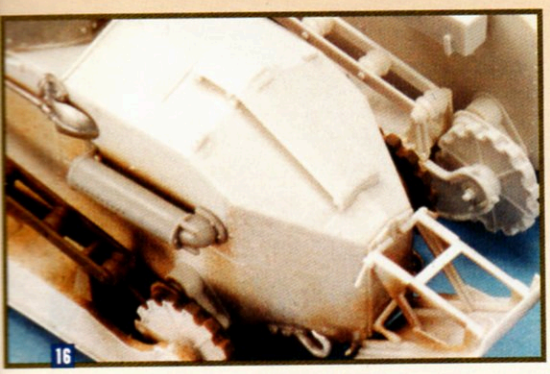




1. These are the rear brackets for the return roller racks on the M1917. They needed some reshaping to match my reference photos. 2., 3. The forward spring assemblies were also slightly modified. 4, 5. Both kits got a set of the great RPM individual track links. These things are really nice and are a vast improvement over the rubber band kit tracks (seen in the upper left of photo 4). They build much like the real thing and the basic components can bee seen in both photos. 6. The tracks will remain workable throughout the building process. Here, they are wrapped around the sponson of the FT17. The finished runs can be seen in the top of the photo. 7. RPM's sponson on the bottom and the modified M1917 on the top. 8, 9. Two views of MR's late production M1917 turret. The excellent white metal tools can also be seen here. 10. Here, everybody is about half way done. RPM on the left, MR + on the right. 11. The 37mm ball mounted gun of the M1917.

12, 13. The kits ready for tracks and paint. 14. This is the new front visor are provided in the MR kit. 15. After removing much of the RPM detail on the M1917, styrene strip was added per the MR instructions. 16. The trench skid of the M1917 was slightly modified with styrene strip. The replacement muffler of the MG set is visible here. 17. Both finished kit prior to painting. This shot give a good impression of the changes necessary to create the M1917 tank. 18-21. Finished shots of the M1917. I was very pleased with the MR conversion. The RPM tracks really give the impression of the real vehicle. I am still researching accurate markings for this model and will add them later. 23-27. The finished FT17 was painted with Humbrol colors after a scheme found in Militaria magazine. It represents a tank still in service in 1940.





the top section and extend it further to the rear, keeping the same height as the top of the frame, then scoop it out. The whole top should be closer to the sprocket.

Once the required detail was removed on the track frames, I wrapped the frame with styrene flat stock per the instructions. I kept these frames as sub assemblies all the way through to the painting of the base coat.

The forward suspension spring assemblies were modestly modified to look more like the units in the photos I had. This is one area that could use a bit of extra work. I couldn't find any photos that showed the spring on the inside of the bracket as MR has it. My photos showed it close to the inside edge of the track-frame. I also had to cut the spring shorter to get it to sit at the correct ride height. MR might have used an earlier model or different version of the M1917 then the photos I had.

Part no. 20, the rear bracket for the return roller rack, is angled as it comes in the conversion. The real photos and even MR's drawings show it facing straight up, not angled.

I modified this part to look more like the part in the photos. This required some cutting, shaping and replacing the base with styrene sheet. I used the bolt heads from the MR part. This can be seen in the in-progress photos.

A point of interest is the wavy style drive sprocket seen in the photos. I believe this is a later design. The RPM sprocket is different, but appears to be OK I have seen photos with both types.

The French tool mounts and stowage box mounts will have to be removed and smoothed out, as they aren't needed on the U.S. tank. MR doesn't supply fittings for the pioneer tools, so you are on your own with these. I made up some quick straps and brackets from lead foil and brass.

The mounting bracket for the trench-crossing skid is a bit different when compared to the photos of the real tank. Not much, but just a little in the bracing on the top. I used styrene strip stock for this.

While I was at the rear of the model, I added a panel-joint line scribed in the rear side panels of the hull.

RPM part no. 16 and 17 where lengthened in order to get the correct gap between the center bogie wheels. This was missed on the French FT kit as the wheels are right next to each other.

I kept the idler wheels off until the very end when I added the tracks. This made handling and painting easier. I added the idler adjustment brackets at this time as well, this helps to get the correct track tension on the finished model.

I really botched it up on the turret. I first glued the 37mm gun to the turret, but when I set the turret down to dry the gun shifted on me and I didn't know it. Now...when you put as much super glue on as I did, it doesn't come off very well, even with debonder. I soaked that baby in debonder so much you could wring the turret out like a wet sponge. It still wouldn't come off. I had to drill and gouge it out. Now, I have the smaller .30 cal MG mounted in there. It's still cool... I guess. I suggest that you drill the rear center of the ball and the center of the turret and pin the whole assemble together with a snug fit using no glue. This is what I did the second time around and now I have the option to remove it and replace it with a scratch built 37mm gun down the road. That will make me feel better!

MR gives you a full ball mount with each gun, but from what I could tell from the shallow recess in the turret, the ball mount should be cut just about in half and then installed. This leaves about half of the ball showing out of the socket.

You also have a choice between the standard turret hatch and one with an antenna mount. They both have holes in the top but one is for an antenna and the other is for signal flags.

The rear engine cover needs to have some of the RPM parts left off for the M1917 conversion. Parts 65 and 66 will do. I added wire grab handles to the resin drivers hatch doors.

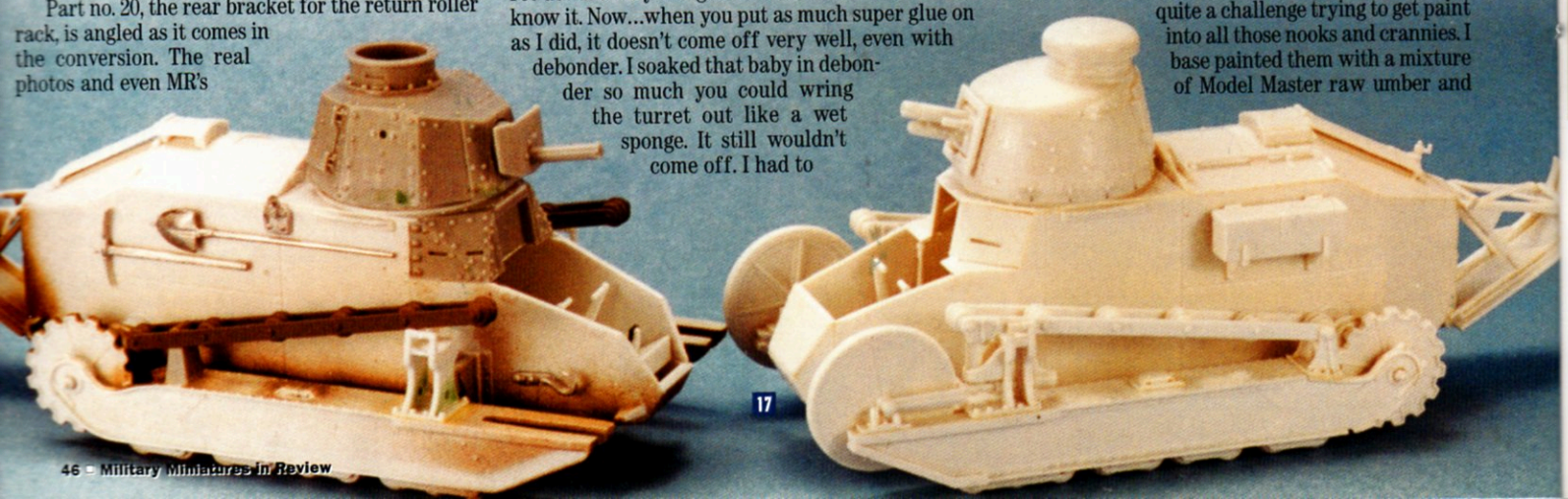
The footsteps on the lower front hull, RPM part no.71, were cut and placed closer to the hull as in photos of the real tank.

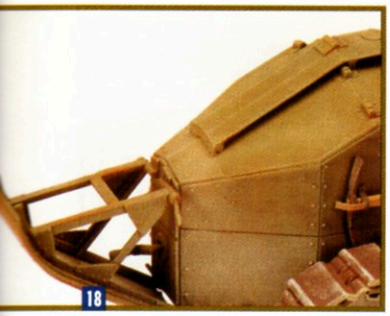
That about sums it up on the build. Like I said before, if you want to build a primo kit, you will have to spend a good deal of time super detailing many of these parts. Overall, it looks pretty good.

Le paint

I painted the French FT17 with a camo scheme found in the Militaria magazine listed below. The colors I used were Humbrol 102, army green and Humbrol 93, desert yellow. This was a tank from 343rd CACC in 1940. I used Silly Putty for masking the camo pattern.

Oil washes and dry brushing was used in the weathering process. I painted the tracks for both kits after they were assembled, but before they were installed on the models. This ended up being quite a challenge trying to get paint into all those nooks and crannies. I base painted them with a mixture of Model Master raw umber and

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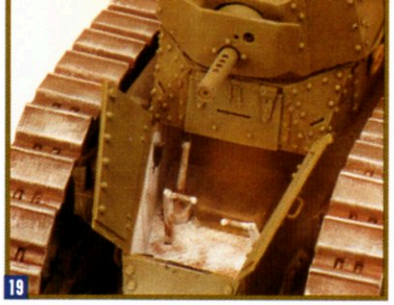
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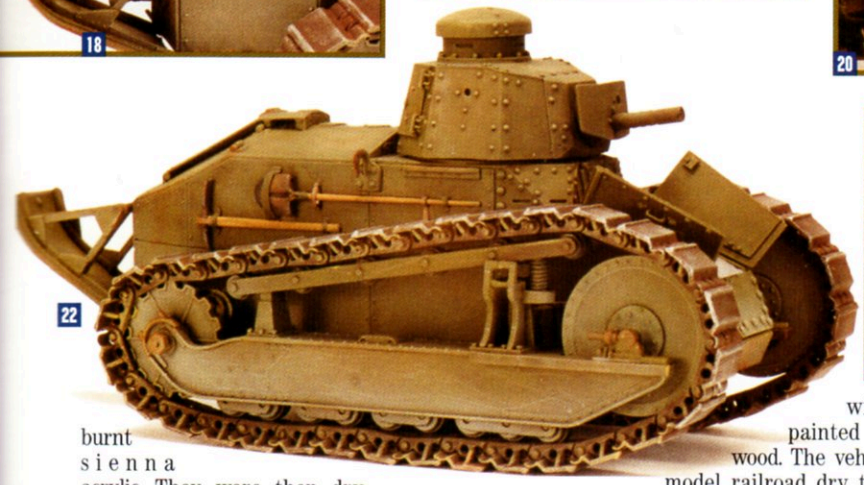
olive drab tanks had graffiti written on them by rail yard workers. One signal tank had "Good Luck Canada Take Em Away" written on the left rear quarter. This can be seen in the Hunnicutt book on the Stuart listed below. I believe some of these tanks were shipped to England as well.

The most colorful markings were those on Marine tanks used in China with the West Coast Expeditionary Force in 1927. They looked great with the eagle, globe and anchor on the glacis and "U.S. MARINES" in black on the side of the track-frames. Also on the rear quarters they had an unofficial marking of an 8-ball (pool-ball) with a single digit vehicle number next to it. I found out from an aircraft modeling chum that the 1/48th scale Accurate Miniatures SBD 1 bomber has the eagle globe and anchor decal in it that just might fit on the glacis of this kit. There are also decals in black of the "U.S.MARINES," which just might work on the track-frames. If you are interested, that may be an option.

I decided to go with the graffiti on the tanks bound for Canada just before WWII. The problem is that the only graffiti I can find in photographs is on signal tanks, not turreted tanks. I am leaving the markings off at this time until I can find more info on the graffiti.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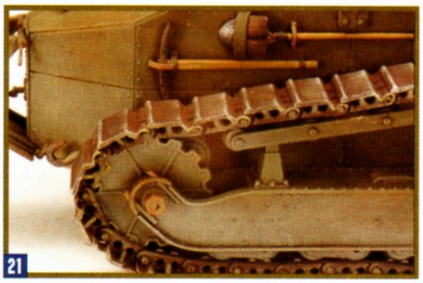
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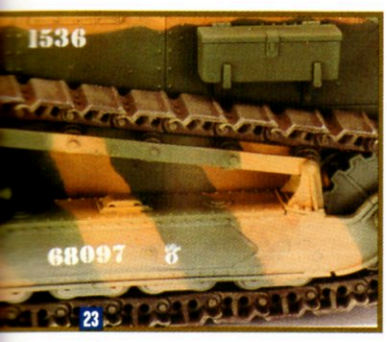
burnt sienna acrylic. They were then dry-brushed with a mix of raw umber oil paint and silver enamel. Model Master chrome silver was used very lightly at the end along with a No. 2 pencil. I then went back over the sides of the track with Humbrol 93 and Pactra khaki; sporadically dry brushing to simulate light rust and dust on the parts of the track that don't wear much. The pioneer tools were painted in a similar manner with the wood painted Model Master wood. The vehicle numbers are model railroad dry transfers and the club symbol and stripe around the turret were hand painted.

The M1917 was painted Model Master olive drab enamel as a base coat. The M1917's didn't wear much in the way of markings. They usually had the early crossed rifles and rhomboid tank insignia on each side of the turret. Some of the M1917's displayed a typical camo pattern of the period: a three-tone color scheme with a thin black line separating each color.

There where a large number of M1917's shipped on rail cars to Canada which they used for training prior to WWII. This was interesting because many of the plain



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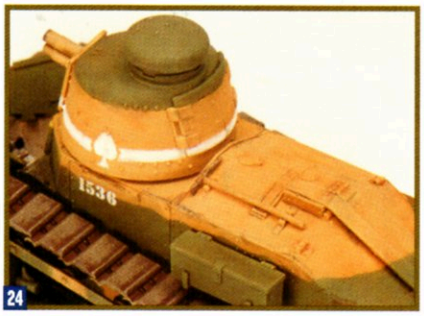

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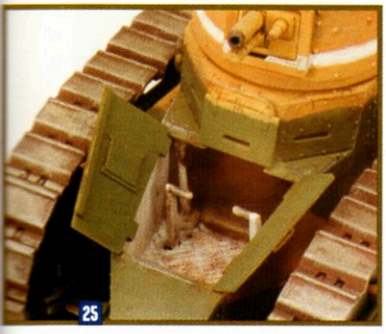
Conclusion

There is finally a good plastic model of one of the more important tanks in armor history. Add to this a nice set of RPM link-to-link tracks and MR Models M1917 conversion and you have a cool pair of little-teenie-tiny-itsy-bitsy tanks for your collection. Enjoy!

—Barry "M29" Beaudry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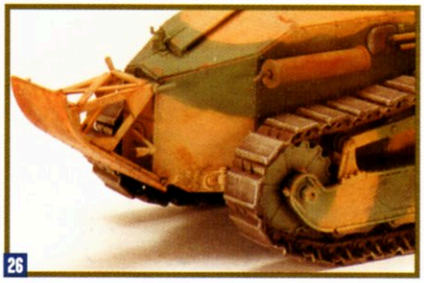
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MMiR RECCE

RPM Char Canon FT17. Kit number MKR35062. Kit graciously provided by RPM's U.S. import agent, Squadron Signal Mail Order. Suggested retail price $24.98.

RPM Char Mitrailleur FT17. Kit number MK35061. Kit graciously provided by RPM's U.S. import agent, Squadron Signal Mail Order. Suggested retail price $24.98.

RPM individual track link set. Kit number MK35900. Kit graciously provided by RPM's U.S. import agent, Squadron Signal Mail Order. Suggested retail price $13.98.

MR models U.S. 6ton tank M1917 conversion. Kit number MRA–3594. Kit graciously provided by the manufacturer. Suggested retail price $22.95.

References

Stuart A History of the American Light Tank by R.P. Hunnicutt, 1992. I found the most information on the U.S. M1917 in this book.

Militaria Magazine No. 23, The Renault FT17. The light tank that fought in both World Wars by Yves Buffetaut and Francois Vauvillier. Color plates by Jean Restayn, Collectors Press Limited, 1996.

U.S. Military Tracked Vehicles by Fred W. Crismon Motorbooks International, 1992. A brief but very informative read on the U.S. M1917.

Military Modelling Lightweight Renault by John Prigent Vol.29 No. 01 Feb. Nexus Special Interests 1999.

1, 2. Two overall shots. Excuse me, could you take your fence down for just one minute? These photos were taken in Nitro West Virginia. 3. This view shows the Buda muffler brackets along with the engine panel and rear of the turret. Check out the turret hatch stop at the top of the domed hatch. 4. The difference in the rear trench skid brackets can be seen here along with the U.S. tie down hook. 5. Notice in this view the wavy shaped sprocket along with the track-frame contour and how close the upper frame comes to the sprocket. 6. The steel idler wheel, track tensioning rail and spring can be seen in this shot. 7. Here's a good view of the suspension and track tension mounts. Notice the suspension springs are on the inside of the track-frame and not in the middle of the support bracket. Also the mount for the jack can be seen here just behind the support bracket. Above the track is the rear mount for the shovel. 8. This is an excellent view of the shovel mount, turret rear, lift hook and front muffler mount. 9. In this photo you can just see the suspension spring mounted on the inside of the track-frame. Also note the footstep mounted flush to the hull. All photos by Barry Beaudry.

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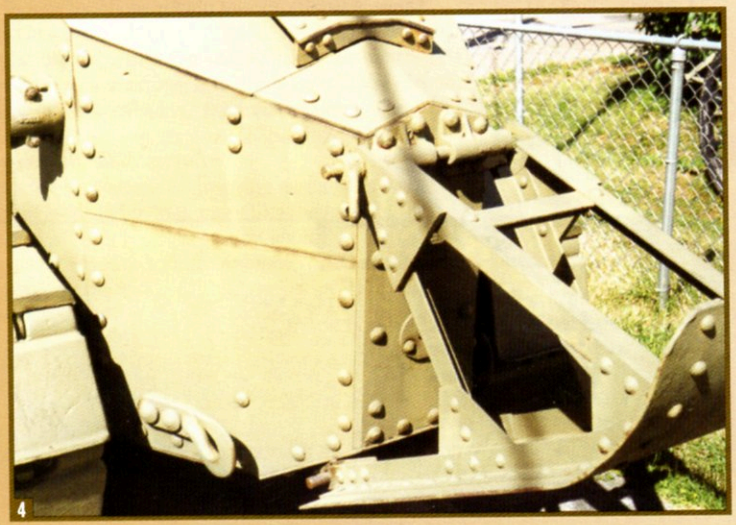
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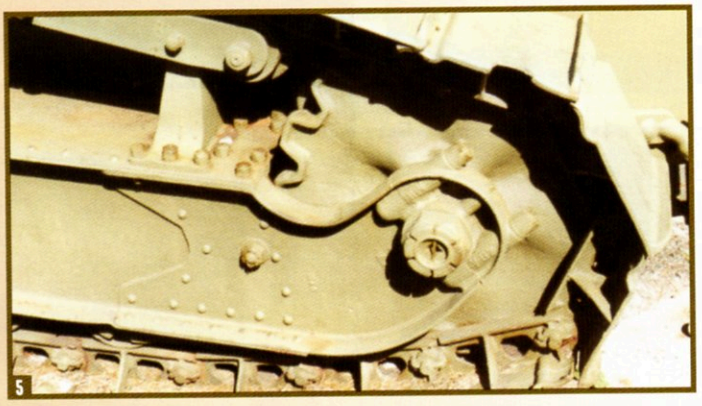
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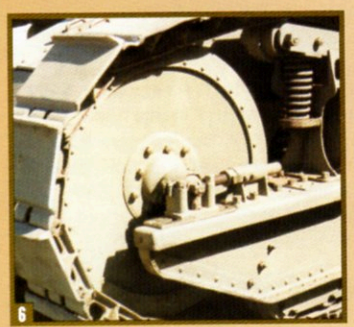
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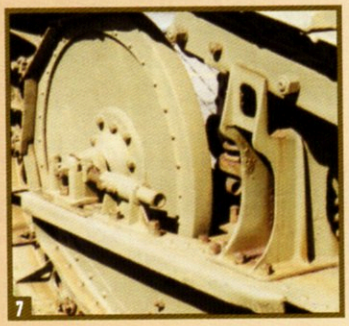
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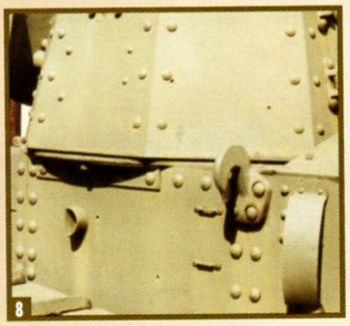
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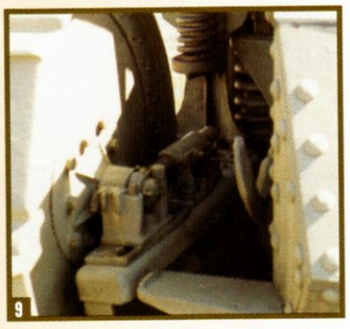
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Big Cat On Campus

Tamiya's new Leopard 2 graduates Ampersand U with high honors.

If you're interested in German armor, your interest most likely ends at the end of the Second World War. This is a shame, really, as you're missing out on some pretty cool stuff. The Germans didn't develop their own post-war tank until 1965, with the introduction of the Leopard 1 MBT. This is an interesting tank all by itself with its Panther and M48 inspired features. The M48 did help flesh out several German tank units during the fifties and sixties, but by the late sixties or so, the Germans were looking for a whole new tank. This was the start of the MBT 70 project. This was a joint project between the U.S. and Germany whereby a common platform would be developed and fielded by both countries. The vehicle would be customized by each nation, but they would essentially be the same.

The idea was developed and some very wacky prototypes resulted. The MBT 70 was pretty much all turret and due to an autoloader system it only carried a crew of three. This included the driver and even he rode inside the turret. The MBT 70 could raise and lower its silhouette using a special suspension system and the German version even carried a 20mm anti-aircraft gun on its turret in addition to the main gun (call it residual paranoia). The main gun, incidentally, was the ever-popular 152mm XM150E5 that (supposedly) fired conventional rounds as well as the Shillelagh missile.

Well, as you might have guessed, the project fell flat sometime around 1970 and both countries went their separate ways. Eventually, the U.S. went on to develop the M1 and much of the data gathered by the Germans went into a program to improve the Leopard 1. The resulting vehicle was so different that it ended up being what they were originally looking for, a whole new tank.

Development of what would become the Leopard 2 and the XM1 (later M1) occasionally crossed over and the new German tank was briefly considered for the M1's job. Although the M1 was eventually selected due to better armor protection, the Germans were a bit peeved that some of their early data was obviously incorporated into the M1's design.

Like the Israelis, the Germans prefer to constantly refine their tank designs. Production of the Leopard 2 runs in batches, which are denoted by their chassis numbers. Each batch contains a series of new features and modifications that set it apart from the others. The first batch tanks were simply known as "Leopard 2," but the second and third batch tanks were Leopard 2 A1. Modernized first batch vehicles were designated Leopard 2 A2, fourth batch vehicles Leopard 2 A3 and batches 5 through 8, Leopard 2 A4.

The Leopard 2 A5 program was seen as a cheaper alternative to the proposed Leopard 3 tank and work began on this in 1989. In cooperation with Switzerland and the Netherlands, the new program was finally given the go-ahead in late 1993. The plan called for converting Swiss, Dutch and German Leopard 2 A4s to the new Leopard 2 A5 standard. There are numerous small modifications, but the major differences are the addition of supplemental armor modules and stowage boxes to the turret, an electrically controlled sliding driver's hatch and a remote video camera mounted on the back engine deck The auxiliary periscope and the commander's sight have also been relocated and many of the turret's electrical and optical systems have been improved and enhanced.

To make it really confusing for the modeler (which I'm sure was foremost in their minds), the conversion uses hulls from batches 6 through 8 and turrets from batches 1 through 4. The Leopard 2 A5 sometimes also carried the designation "KWS II," which in reference to the additional turret armor (KWS I denotes the new 120mm gun).

The first Leopard 2 A5 was delivered to Panzer Battalion 33 in December 1995.

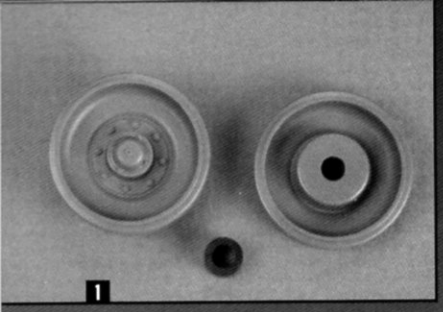
Warum, Tamiya? Warum?

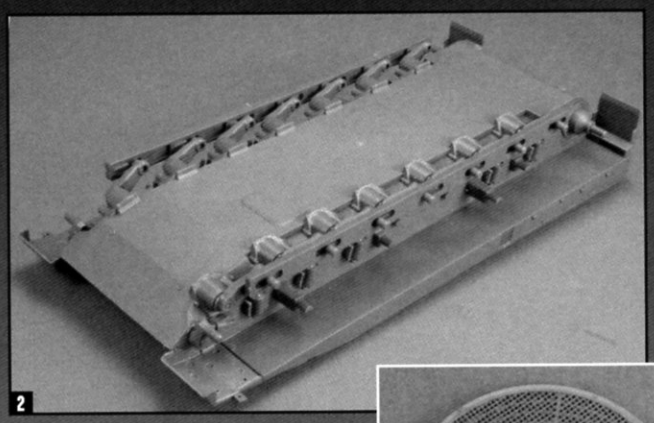
Just why did Tamiya do a Leopard 2 A5? One can only speculate (so one will). Perhaps it was the Leopard's close relationship with the Japanese Type 90. The similarities are striking and the 120mm gun of the Type 90 is made in Germany and is the same one found in some Leopard 2 A5s.

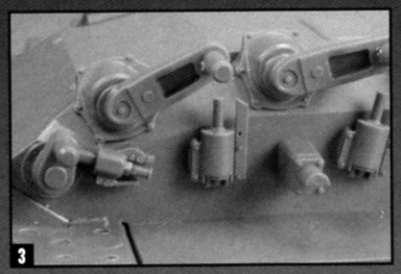
Whatever the reason, I am very thankful. This is a great model. Have you ever looked at a new Tamiya kit and asked, "just how will Tamiya out-do itself?" The answer, it seems, is they simply do another kit.

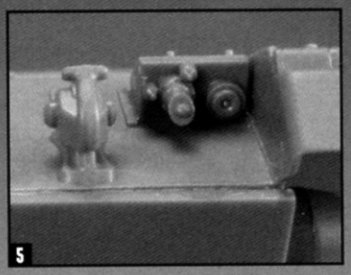
This is not a very complex model and most of what is so great about this model is tooled, not built.

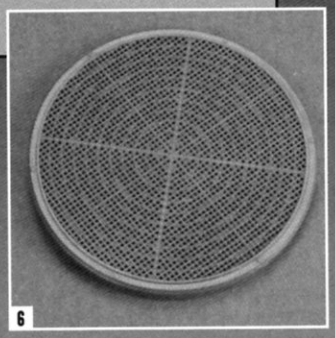
Construction is easy. Before removing the clear shrink-wrap, just tap the top of the box three times

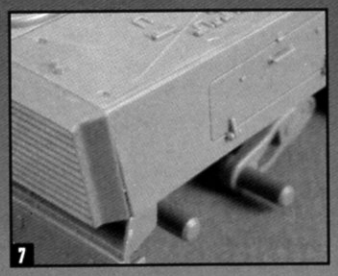


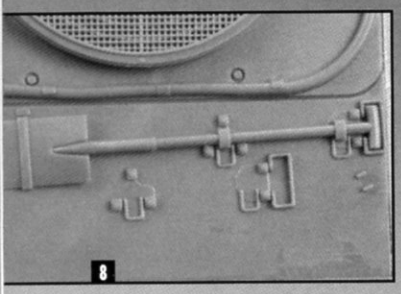


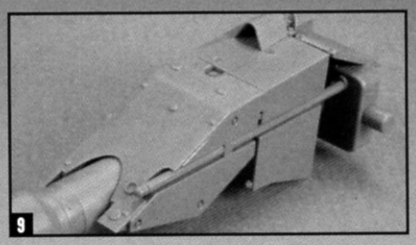


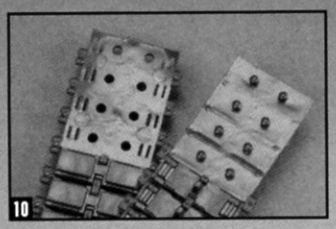


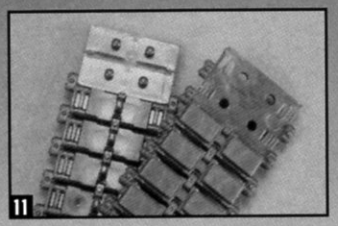


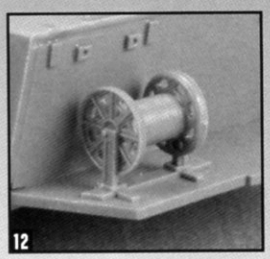


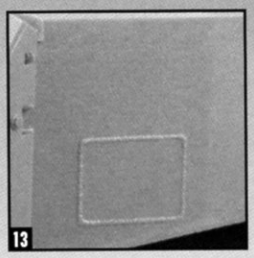




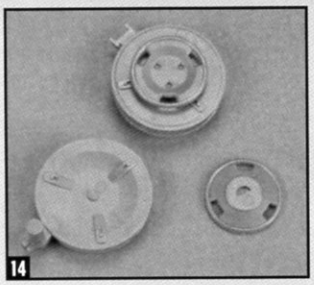


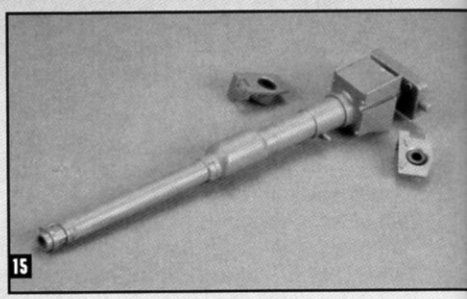






1. Both sides of a road-wheel. God bless the poly cap. 2. The bottom of the hull is fully detailed. 3. The torsion arm stops are separate, as are the return roller arms. 4. The bare-naked deck. 5. The left headlight base. 6. The engine deck screens—it could be love! 7. Don't let this happen to you! The rear deck gaff. 8. Here, the top shovel has been added while the space beneath is blank. It's molded-on magic! 9. A set of armored panels also gets added around the mantlet. Note the extension tube for the co-axial MG. 10, 11. This is the before and after on the track trim job. Easy stuff for a sharp X-acto. 12. This wire spool later gets hidden by the rear turret stowage bin. 13. Tamiya gets an "A." The welded ammo port seen on batch 6 vehicles and later. 14. The turret hatch components. 15. These are the main barrel components. 16. I substituted flat, pierced screen for the kit's mesh. Here we see the frame, template and some of my cut pieces. 17. The gun fire simulator. I left this





with the blunt end of your X-acto. Then open the box and put the turret on. Tap it four times and it comes out painted! Wow!

OK, maybe it's not quite that simple, but it's probably one of the easiest builds I've done in recent years.

Let's get started, shall we?

If you look closely at the box or the instructions, you'll notice that the model was produced with the cooperation of Krauss-Maffei, the primary contractor for not only the Leopard 2, but also for much of the Leopard 2 A5 program. This is evident right away in the meticulously detailed suspension. Even the bumpers for the torsion arms are all separate parts. The return rollers are fixed, which is OK by me, as none this lavish styrene beauty will be visible later on.

The T-meister thoughtfully provides styrene rails to keep the torsion bar arms straight while the glue dries. I love this. Please do this for all tank models from now on. I'll wait here.

When I built Tamiya's Type 90, I found (rather late in process) that the tracks were too long. Before gluing the Leopard's links, I checked and sure enough, they were also too long. They are very easy to shorten at this stage. I removed two of the half links from each end and that seemed to do the trick. Cutting them at this stage still allows you to glue them together using the overlapping links.

There is a slight wrinkle when adding the rear hull. It's easy for this single panel to shift while gluing it and this can result in a minor bow near the bottom of rear side panel. A small amount of superglue added from the bottom up will prevent this. When the giant top hull piece is added, everything still comes into line.

And speaking of that, there is a small hole that needs to be opened on the back deck to accommodate the remote camera. Does this indicate a Leopard 2 A4 in our future?

Completing the hull is just a matter of adding the details. And what details they are. There are two round screen modules and Tamiya has accurately rendered the complex pattern of the grills right there in styrene. This is nothing short of amazing. I had to sit and stare at them for 6 or 7 hours while gently dabbing my tear-filled eyes. I also briefly considered having them made into either earrings, or a groovy neck medallion, but after all, I was building on a deadline...

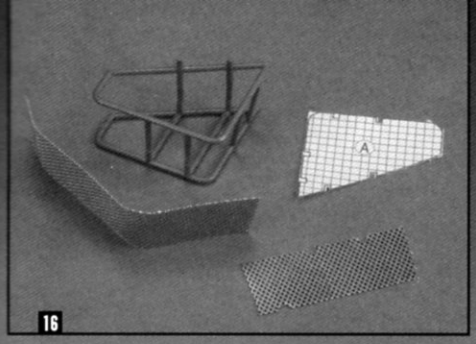
The tools are almost as nice. The Germans still use the "cam-clamp" method for attaching their tools and the clamp handles are molded right onto the hull. Now, molded on details usually provoke a lot of womanly shrieking and wailing, but once the individual tools are installed and painted, you'd swear you were looking at photo-etch. Frankly, I'm still a little shook up about it.

The headlights are another revelation. Each is a four-part assembly that includes a base and lamp casing. Tamiya does not provide clear parts, but they do give you separate lenses that you can paint and drop in later.

The tow cables are the notched types, and these still bug me for some reason. I plugged the notches with styrene and later drilled them out to accept braided wire. I indulged in one of my only detail deviations here, by carefully scraping off the two cable clamps and replacing them with new ones made from brass strip.

The fenders will have to be added after painting, but the fit was so good that they were just tacked on during the process. More on this later.

I should mention at this stage that Tamiya also provides periscope lenses for



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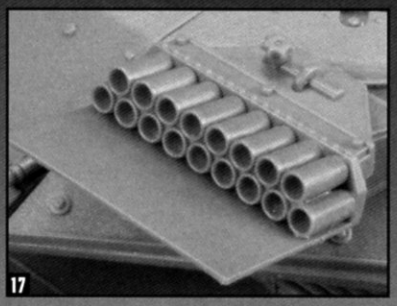
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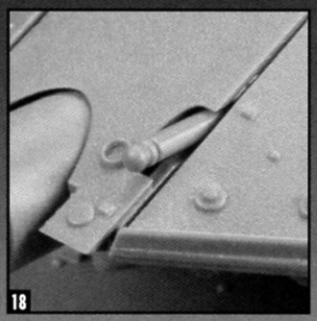
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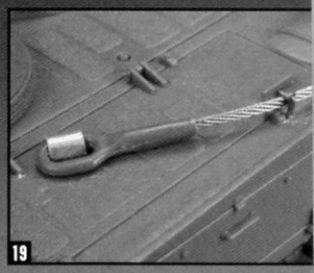
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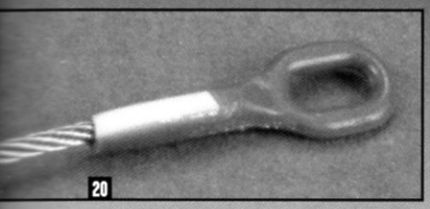
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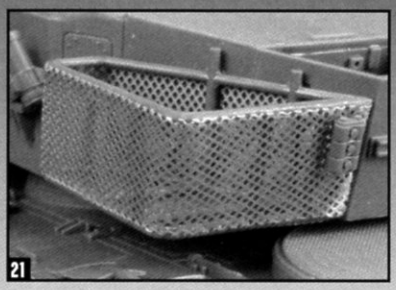
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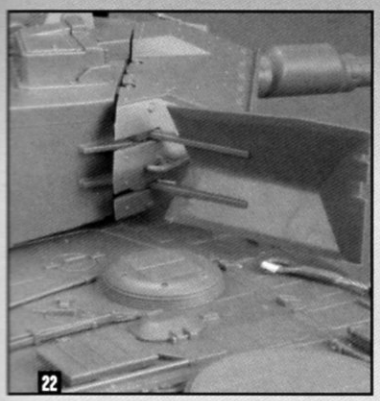
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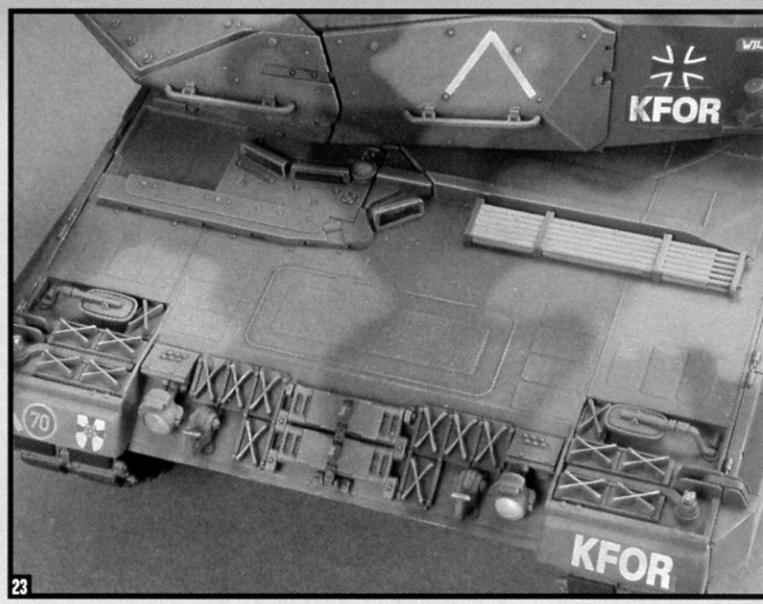
part off. 18. This shows the plug for the co-axial MG tube. When not installed, it hangs from a chain attached to the knob just below it. 19. I couldn't resist adding a few etched bits... I know, it's a sickness. 20. I plugged the notch in the cable head with styrene and drilled them both to accept braided wire. 21. The end results of the stowage basket work. 22. The side turret panels are hinged to provide access to the engine deck. 23. The completed front end. The periscopes were all painted with Tamiya clear blue prior to installation. 24. I used clear lenses from MR for the headlights. The tracks were hand painted (ugh!). 25. "I'm too sexy for the tank park..." The finished back deck lookin' mighty sweet.



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installation throughout the vehicle. These would be tough to mask, so I left most of them off until after painting. These were not easy to get at later, but this shouldn't be problem if you're a vertically challenged contortionist. More on this later, too.

Ladies and gentlemen: the turret

The turret builds much the same way that the factory must modify it. You add the new armor components around the basic structure and, voila! You've got a turret.

There is a separate set of armor panels for the mantlet and I got a kick out of the co-axial MG tube extension. This tube contains a small plug, which hangs from a chain when not installed. Tamiya has rendered it plugged, but it would be a cinch to hang it.

The side armor panels are hinged and in real life are meant to swing out of the way of the engine compartment hatch (with the turret turned to the 3 o'clock position). A couple of people who have observed this model have remarked that the front armor appears to be a shot trap. These panels are actually meant to collapse when hit and they don't have any kind of ballistic properties—in other words: there ain't nothin' bouncin' off these things. Their main purpose is to increase the already formidable protection of the front turret armor. These sections are also replaceable in a hurry, much like the turret of the Israeli Merkava.

Other worthy details are the wire spool for the rear stowage rack, the PERI-R17A2 periscope (it attaches with a poly-cap, so it will remain removable), the side smoke launchers, the MG 3, the turret hatches (detailed on both sides) and the fire simulator for the front of the turret.

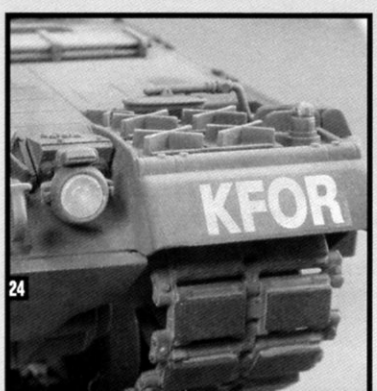
This last item is a device used to simulate the explosion of the main gun in war games. I took a picture of it, but opted not to permanently install it on my model.

My favorite nifty little detail is the side ammunition door. This is depicted welded shut and that marks it as a sixth batch turret and above. It was so nifty, that I briefly became tingly.

Additional periscope glass is installed throughout the turret, but since access was so good, I left it all off until after painting.

Basket case

My other major deviation (you know, on the model) was the addition of new mesh for the side stowage box frames. Tamiya provides the standard black woven mesh we've seen now for many years. However (you knew this was coming), the real baskets do not utilize mesh at all, but rather a perforated metal sheeting. To replicate this, I used old style photo-etch mesh. You remember, in the dark days before woven mesh, there was the flat ugly stuff. I used the patterns provided to get it all cut out and then carefully attached it to the frames with superglue.



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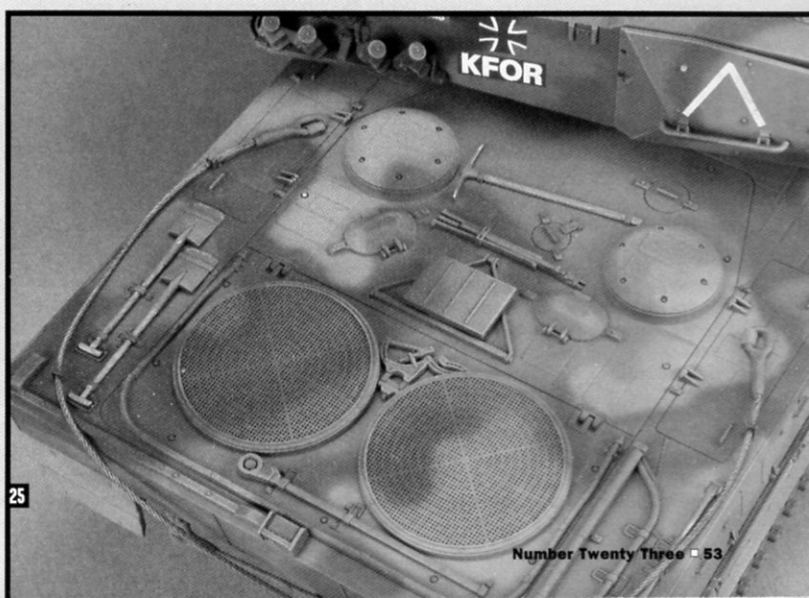
The Leopard's spots

Tamiya has introduced three new paints into its acrylic line just for this kit. They are XF-67, XF-68 and XF-69. These weren't available in time for this review, but I must admit that XF-1 (black), XF-58 (olive green) and XF-64 (red brown) looked pretty darned close to me.

I first sprayed the entire tank black, then began carefully applying the camo scheme using the box top as a reference. Modern German camo is quite precise, so I used the finest line I could coax out of my Iwata airbrush. I use the Micron B, which spits out a super fine line. I outlined the pattern first, then went back and filled in the shapes with a wider line.

The suspension was painted plain olive green and since the wheels were left off during the painting process, I wasn't too concerned about over spray while applying the camo. I simply tacked the side skirts on



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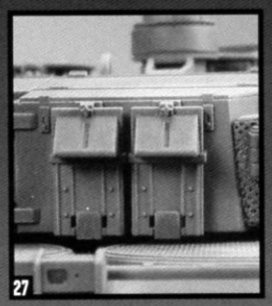
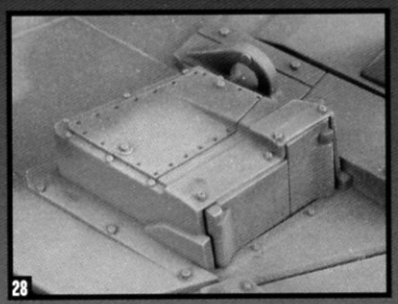
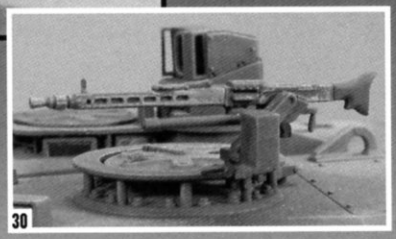
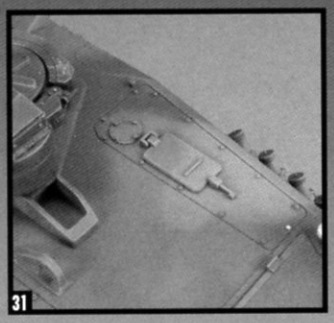
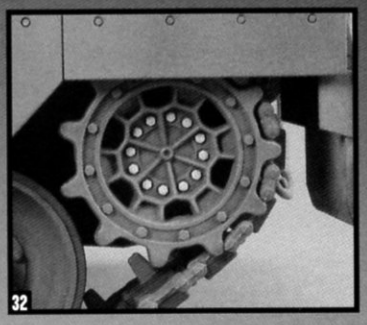
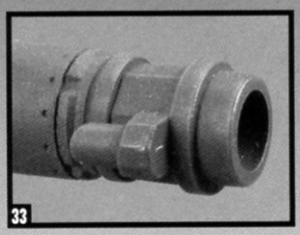












with Blu-tak and this was enough to keep them on for the entire process.

Because of their thickness, I normally shy away from Tamiya decals. But I was left with little choice for markings on my model, so I tried something new. Once my camo scheme was complete, I sprayed on a thin coat of Tamiya clear (X-22). This gives the model a nice sheen and provides a good base for the decals. I chose the Kosovo scheme for two reasons. The first is that all the markings had solid backgrounds and could be cut out right to the edge of their image. The second reason is that I saw this exact vehicle on CNN last year and it looked really cool.

I used Solvaset mixed with water to soften the decals and applied it several times to get the desired result. Cutting it with water prevents the solution from damaging the decal's ink. Several diluted applications seems a bit safer.

I have been searching the world over for an acrylic flat coat that will give me the same effect as I used to get with Testor Dullcote. Well, I think I finally found it in Vallejo matte varnish. I have used this before, but for the first time I applied another Dullcote trick by pouring off a good portion of the clear portion of the mixture. I then thinned what was left with distilled water. This mixture was sprayed over the entire model and it went nice and dull. A drop or two of light gray was added to a final over spray and this simulated road dust around the lower hull.

The whole kit and caboodle got a oil wash with special attention paid to the many little bolts, nuts and fasteners. Each camouflage color was drybrushed with a separate color mixed from Vallejo acrylics and those above mentioned items got even more attention.

The only things to detail paint were the tools and these got wooden colored handles and a little steel-colored highlighting on the business end.

The various lights got picked out with silver and Tamiya clear red or orange. I used clear lenses for the headlights made by MR Models of Germany. This is set number SP-11 and the 3.5mm size fit perfectly.

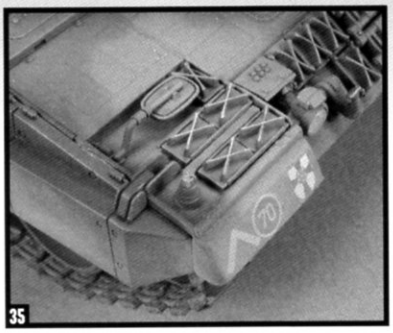
In photos of the Leopard, I noticed that sometimes a new fastener was added that was not painted. I picked one or two bolt heads out on the turret and hull, and did this to all the bolt heads on both drive sprockets (I have a photo of this, too). The final painting touch was the rim of the commander's periscope, which, for some reason, is painted red.

I was hoping for an easy way out on the tracks, but no dice. Photos show that the tracks have black rubber blocks on the inside and the outside, and that the inside blocks are glossy from contact with the roadwheels. The metal parts are a dull, dusty, slightly rusty, tan.

I sprayed the tracks Tamiya flat black (XF-1), then sprayed a light coat of the Tamiya clear to give the inside run a sheen. And then there was the hand painting...

Yes, I hand painted all the metal parts with Vallejo wood. This color was a dead match to the photos I had. It would have been a real bitch to have to mix something for this! It took the better part of three hours to finish this. My only break was that the covered portions of the track runs can be skipped.

A couple of small drops of superglue attached the skirts and a final dusting of brown pastel finished it off. Wahoo!



The moral of the story

In my infinitely humble opinion, this is definitely the best of the latest round of Tamiya kits. I am not the world's biggest modern German armor freak (the key part of the phase being "German armor"), but I may become one as a result of this model. You might, too, so don't discount this great kit just because of the subject matter. Think about all those great dio possibilities now with the Wiesel, the Fuchs, the Luchs and the newer Marder.

The Leopard 2 A5 kit from Tamiya rocks!

—Pat Stansell

26. The back end. The braided wire is a bit more convincing as opposed to the nylon string provided in the kit. Note the rear mounted camera running along the edge of the deck. 27. These wedge-shaped objects are to block the tracks during transport. 28. The main gun sight. The armored doors can be positioned open, if you'd like. 29. The commander's panoramic sight. The rim around the sight aperture is red. 30. The turret mounted MG 3. Look familiar? 31. I don't know why, but this area looks cool. I painted one of the bolt heads a steel color after a photo I saw. 32. I did the same thing on the sprockets, also using a photo as an example. I wonder if this ever occurred during WW2? 33. The business end of the main gun. 34. The long door is the access to the NBC controls, while the shorter door is one of the crew stowage bins. Solvaset did a good job of getting the KFOR marking to conform to the weld bead around the ammo door. 35. I painted all the grouser and spare track blocks with camo color. The wire guard over the side marker light was drybrushed with green rather than painted.

MMiR RECCE

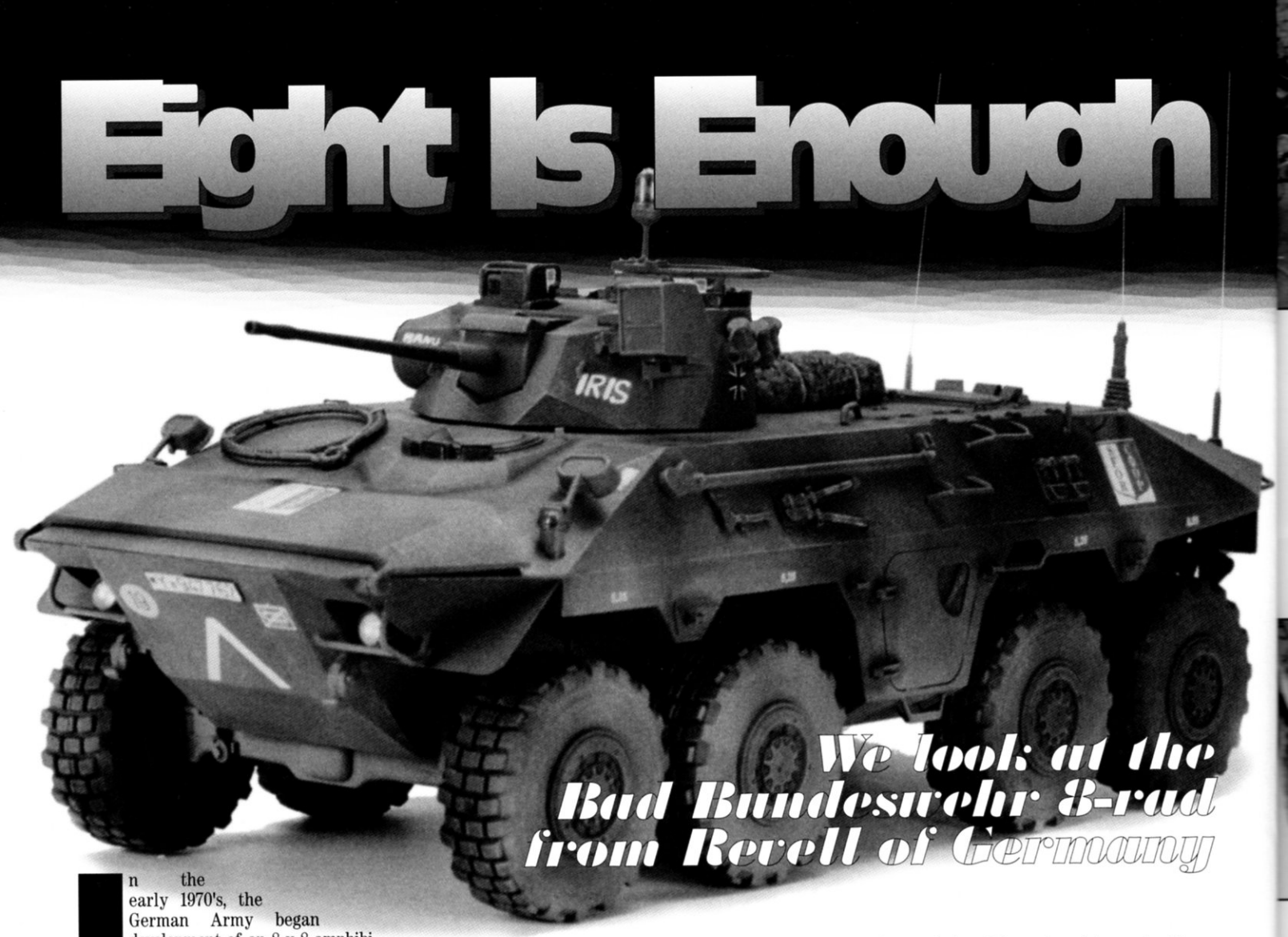
Tamiya Leopard 2 A5 Main Battle Tank. Kit number 35242. Kit graciously provided by the manufacturer. Suggested retail price $52.00.

References

New Vanguard 24, Leopard 2 Main Battle Tank 1979-1998 by Uwe Schnellbacher, Osprey Military, 1998. ISBN: 1-85532-691-4. As usual, an excellent and reasonably priced reference. Contains the full story of the vehicle with tons of photos and color plates.

Waffenssyteme Leopard 1 und Leopard 2, by Walter J. Spielberger, Überarbeiteter Band 1 der Serie Militärfahrzeuge, Motor buch Verlag, 1995. ISBN: 3-613-01655-9. And you thought he only did WWII stuff. This German language book covers everything you always wanted to know about the Leopard. Very thorough.

Eight Is Enough



We look at the Bad Bundeswehr 8-rad from Revell of Germany

In the early 1970's, the German Army began development of an 8 x 8 amphibious armored reconnaissance vehicle. Production was started in 1973 by the firm Rheinstahl Wehrtechnik (now called Henschel Wehrtechnik) and the vehicle was designated Spahpanzer Luchs (Lynx). The first vehicles were ready by May of 1975 and the Army began receiving them in September of the same year. A total of 408 Luchs were produced when the production ended in 1978. In 1982 an upgrade program to the existing fleet began with the addition of updated thermal sights and a 20mm Rheinmetall MK 20 RH 202 cannon, which is the same weapon used in the Marder 1 ICV. The addition of the upgraded sights allowed for the elimination of the external infrared searchlight. The upgraded vehicles were designated Spahpanzer Luchs A1, which included the upgraded radios and A2, which included all the modifications.

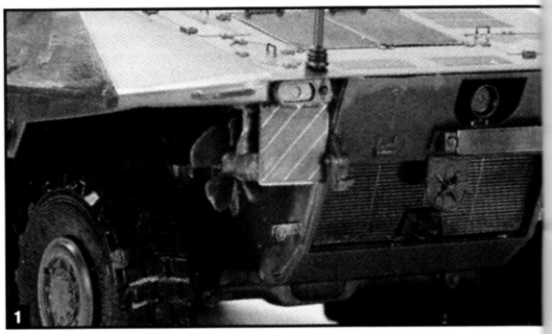
The Luchs is a very interesting vehicle. It is fully amphibious and can be steered in the water via two propellers at the rear of the vehicle. When operating on land, the Luchs can utilize full eight-wheel steering or the standard four front wheels. It has two driving compartments and can be driven either forward or backward at the same top speed of 56 mph. The Luchs is fully armored and offers protection against small arms fire and shell busts. Like many modern AFV's, the vehicles 10-cylinder diesel engine is a module that can be removed quickly and in its entirety, and can be run while out of the vehicle. Cool. Weighing over 20 tons, the Luchs is quite a load as far as armored reconnaissance cars go and is currently not cleared for amphibious operations, although it is capable.

The Luchs has a crew of four, the commander, gunner, driver and radio operator. This latter crewmember sits in the rear and can double as the driver when traveling in reverse. The Luchs is also protected from NBC agents and has a 7.62mm machine gun mounted on a ring skate mount at the commander's hatch. The traverse of the turret and the elevation and depression of the 20mm cannon are actuated and controlled via electro-hydraulics. Both the commander and the gunner can aim and fire the weapon. Vehicles deployed to Bosnia were equipped with Global Positioning System (GPS). There are no external differences between the variants other than optics and radios, so the modeler won't have any trouble backdating.

Gettin' in to it

Being my first kit from Revell of Germany, I was a little skeptical about what I was getting into due to mixed opinions circulating around about the accuracy of the kit. The packaging of the kit was good; there were no broken or missing pieces. Included in the kit are three large sprues, all individually wrapped, a collection of clear parts for the headlights and warning beacons, a length of wire for the antennas and eight soft plastic tires. The instruction sheet comes in the form of an 18-page booklet that is very clear and concise and, if followed, will pose no surprises to the builder. Also included are markings for five vehicles from early 1986 up to 1997. If building the early version, you have a choice of the early or late version 20mm-gun barrel in step #42. You have a ton of building to do before you get there, so there is plenty of time to decide. However, if building an early version you would have to scrounge for an infrared searchlight.

At this point I will get my few complaints out of the way. The major problem with this kit is the plastic. It reminds me of 1970's vintage and is a pain to clean up. I call it gummy. When sanding, the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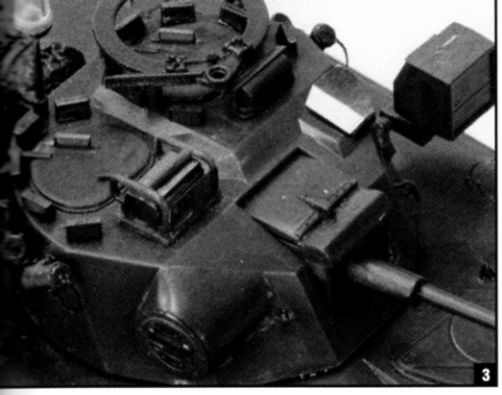
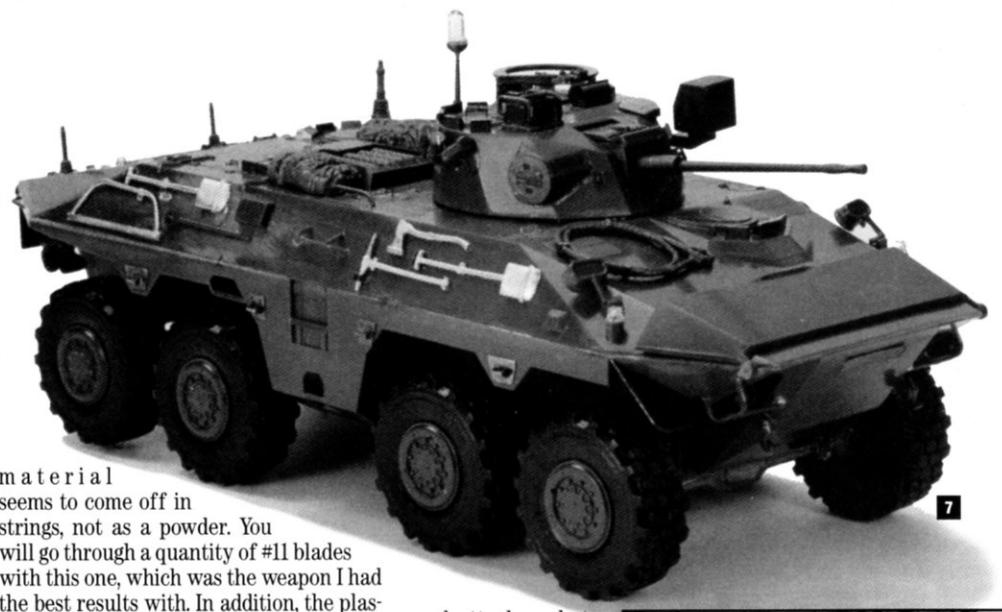
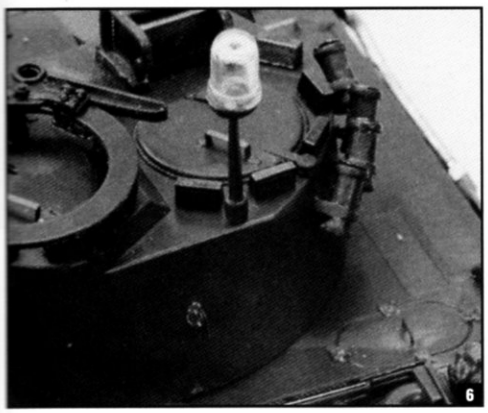






1. The rear props. I made mine articulate by using the hot screw driver method. The propellers face forward under normal operating conditions and are rotated 180 degrees when going amphibian. The propellers drive and steer the vehicle when it's in the water. The fenders are Eduard items. 2, 3. The turret offers the only build option in regards to an early or late version 20mm cannon. 4. The headlights front and rear are hollow to accept clear lenses. I used MV lenses, #159. 5. The back deck. I used the beautiful Eduard engine screen as well as the mud flaps. 6. A very nifty clear part is provided for the turret warning light. This was a common item on many Bundeswehr vehicles and I'd love to see it available from an aftermarket source. 7. All ready to spray, man! 8. It's Eduard, again, on the smoke launchers and the guards for the vision blocks.

material seems to come off in strings, not as a powder. You will go through a quantity of #11 blades with this one, which was the weapon I had the best results with. In addition, the plastic is very glossy and does not bond well with super glue. This made the placing of photo-etched bits real fun. In some areas, I had to scuff up the area where the photo-etched part was to go in order to get a good bond with the part. You will notice this in the in-progress photo's. I thought that this might have been my luck of the draw, but talking with other modelers, it proved to be across the board. Hopefully, Revell will address this problem. In any event, liquid cement, such as Amberoid, will do the trick.

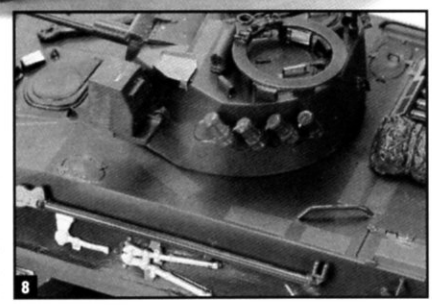
As far as accuracy goes, the kit is not too bad. When completed, it looks every bit a Luchs. Some of the smaller details are on the chunky side, so I would recommend the Eduard update set, which will help out the weak areas. The tires seem a bit small when compared to some of the after market examples out there, but the tread pattern looks correct. I was happy with them so I passed on the after market option.

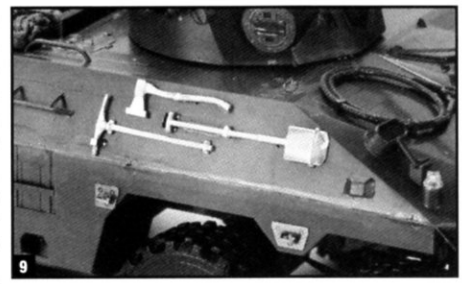
Studying photos of the Luchs you will notice that different brands of tires do appear. There are early and late pattern tires but I do not know the difference. Perhaps someone who knows can fill us in.

Once the tires are on the model they look fine and were an easier option when faced with a deadline.

The first step in the construction is to attach the rear plate to the hull bottom. Once dry, attach the hull top and you will discover that this is one big armored car. At this point it resembles a boat more than an AFV and I could not help thinking: where is the interior? As cavernous as this kit is, a few inside bits would have made opening some of the hatches a nice option.

The parts went together with little problem using liquid cement. If you use rubber bands or tape to hold the upper and lower tightly together, you will get away with not having to fill. The upper and lower are attached to the sprue with some pretty hefty gates. Removing them caused some damage to my upper sides. The Eduard set offers a detailed right side stowage bin. I didn't use it, but I thought it would be helpful to note that the bin and its details need to be added to the lower before you close it up. You have to remove the existing bin and construct and attach a photo-etched box to the inside of the vehicle.





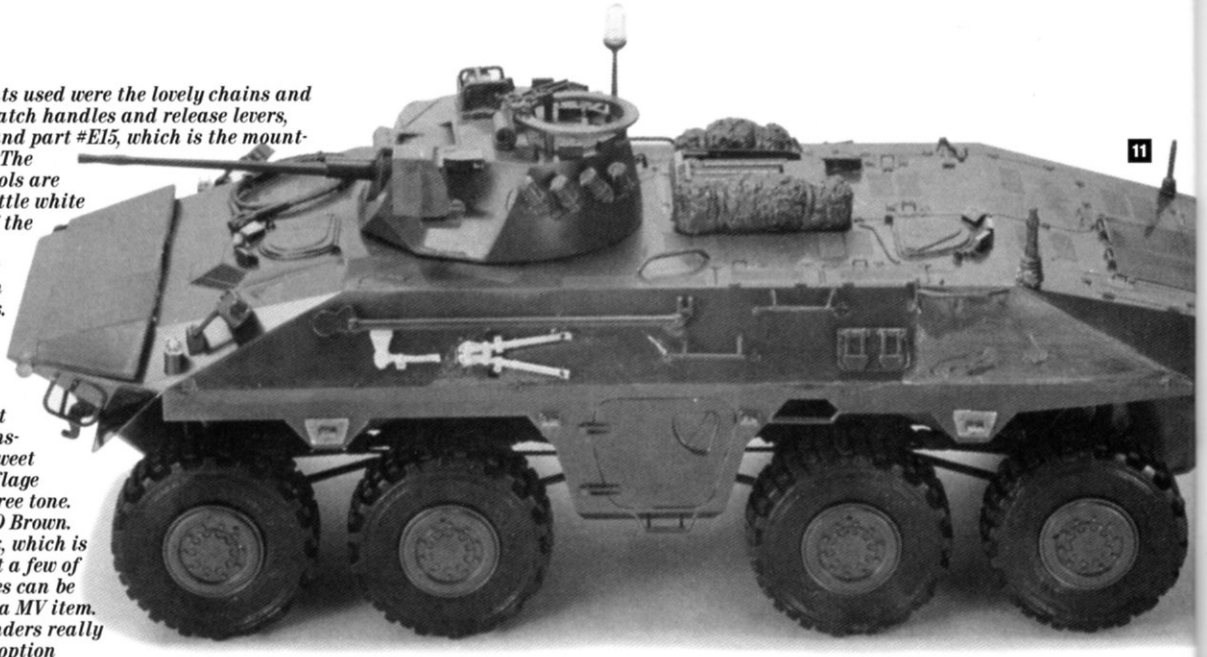
I'm suspended

Next on the agenda is the suspension and includes steps #3 through #24. This is the most involved portion of the kit and will take a couple nights of work. It's too bad that most of this work will go unseen when the model is complete. Most of the major components are there but the adventurous will want to add brake lines and other conduits. Being an eight-wheel drive with all the wheels pivoting, I considered articulating the wheels. The problem with this is the quality of the parts. Very chunky. After cleaning up all the components I just ran out of gas. Many of the linkage assemblies and tie bars are cast as one piece and are positioned for straight wheels. Separating them would be a real pain; many of the parts would have to be scratch built with tons of pivots. Could it be done? Yes. Is it worth it? It is up to the builder.

The suspension builds from front to back and if you follow the instructions you should have no problems. In step #3 you add the spring assemblies, parts #4, #5, #6 and #7. Make sure you put them in the correct orientation. It is a good idea to take off the parts you need as you go along. Due to the sheer number of parts, it's easy to go astray. If using after market tires, you will have to omit part #13 (brake drum) and part #14 (retainer). The after market wheels include the drum and will need to be carefully drilled out to fit on the axle. Again I did not use them, but we here at MMiR are just full of little tips that we can't help passing on to you the gentle reader. Follow the instructions and you'll survive...

Propelling along

Steps #22 and #23 deal with the propellers. I made mine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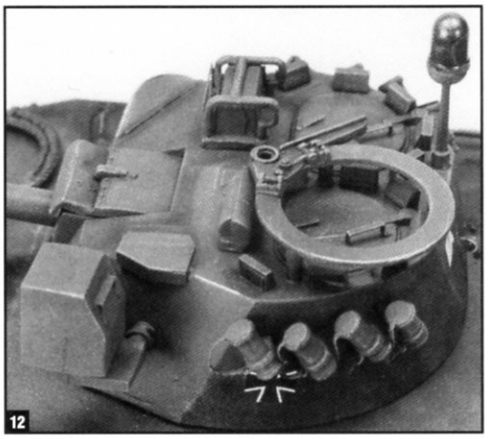
9-11. The other Eduard enhancements used were the lovely chains and covers for the smoke dischargers, hatch handles and release levers, vision block guards, lifting hooks and part #E15, which is the mounting bracket for the IR search light. The lovely little modern Bundeswehr tools are from MR Models. These are great little white metal castings, which have most of the clasps already molded on. I used some of the Eduard parts to spruce them up. The set is includes enough tools for two modern German AFV's. 12, 13. The Eduard set will definitely help with the turret, especially in the area of the gunner's sight. Eduard shell ejection port is a real treat, too. 14. The molding of the kit is crisp and small details still translate well after painting. 15. That sweet engine deck screen. 16. The Camouflage scheme is the standard German three tone. I used Polly S NATO Green ND NATO Brown. The black is Aeromaster Tire Black, which is more of a dark gray. 17. In this shot a few of the real small Eduard grab handles can be seen. 18. The rear headlight is also a MV item. The warning stripes on the rear fenders really pop. 19-21. I went with the marking option with the most color and this is evident in these overall shots.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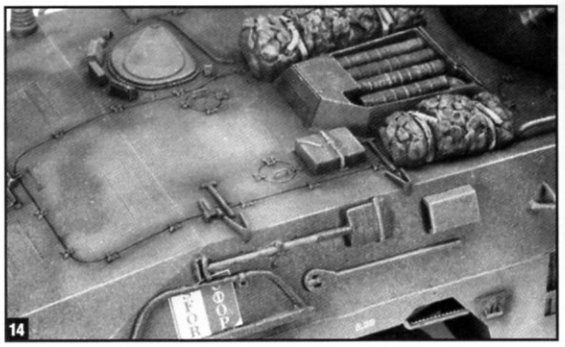
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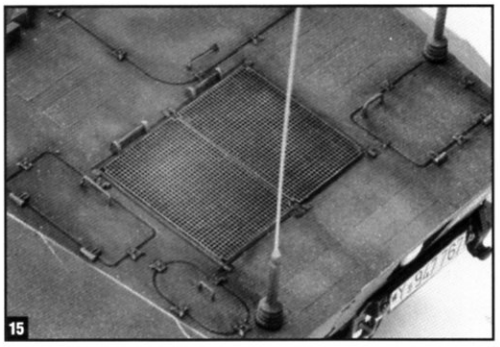
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articulate by using the hot screwdriver method on the inside of the lower hull before closing up. The propellers face forward under normal operating conditions and are rotated 180 degrees when going amphibian. The propellers drive and steer the vehicle when it's in the water. Doing this left my display options open. The headlights front and rear are hollow to accept clear lenses, which is "sehr gut." I used MV lenses, #159. For the lower front end I used the Eduard front fenders and data plate, parts #E21/22 and #E19. Be very careful when removing and cleaning the kit brush guards, they will break. If I had more time I would have replaced these with homemade versions from brass rod.

Eduard gives you additional warning plates to use in conjunction with the fenders, which have the diagonal pattern for the reflective stripes, part #E55/56. Unfortunately, they did not fit on my kit, but after looking at my references I noticed that warning plates are attached at weird angles. The Luchs is deemed too wide for German roads, so the plates are required when driving on same. They are removable on the real thing and many vehicles in the field can be seen without them.

Eduard strikes again

The lower rear hull was finished off using a mix of the kit parts and the parts from the Eduard set. I used the beautiful Eduard engine screen, mud flaps, data plates and reflectors. The screen is a real work of art, but be careful when removing and cleaning, it will bend with the lightest touch. The rest of the parts are from the kit and they looked fine. The clear lenses for the brake lights were left off for painting. I lost one of mine in the process, so they had to be painted and filled with Krystal Clear later. At this time I also added the tires. You could leave them off but I like to get as many parts on the model as possible. Call it personal preference.

Moving to the upper hull the Eduard set really comes in handy. Of course the screens were used, as well as the guards for the vision blocks. There are six total and they do go in a specific order for the front diver's position, so follow the instructions carefully.

I also removed all the little handles on the hull top for the various hatches and compartments and replaced them with Eduard's handles, part #E38. This was a mistake. The tiny handles were constantly breaking off during the construction. I would put these on last, but there are no guarantees that they will all make it. Such is life. While on the grab handle kick, I replaced the kit side handles with the Eduard parts. Each handle is made up of two parts, a mounting plate and the handle itself, four per side. These look better than the kit parts but are, unfortunately, not accurate. The handle portion is round not flat. Bummer.

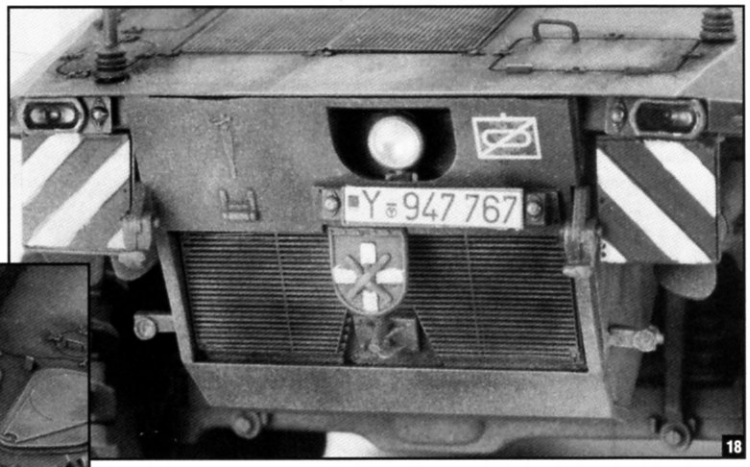
One of my least favorite modeling jobs is removing all the remaining details from kit tools. As I said earlier, the kit parts are a bit chunky in this area and due to the nature of the plastic this task was made even more laborious. Enter the lovely little modern Bundeswehr tool set from MR Models. These are great little white metal castings, which have most of the clasps already molded on. There was very little clean up involved and I used some of the Eduard parts to spruce them up. The MR set is a very useful product and includes enough tools for two modern German AFV's. I'm all for short cuts.

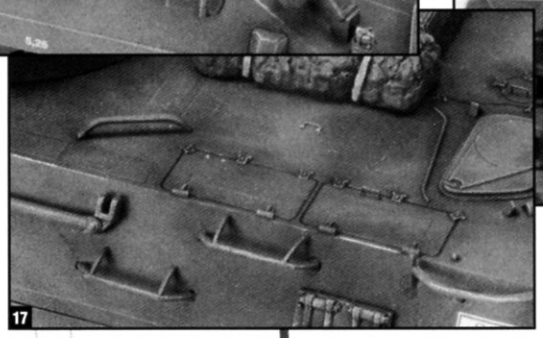
The washboard, part #51, was a bit tricky to remove from the sprue. It's attached along the whole length of the part and it's very easy to remove more of the material than is required. I managed to score it with a #11 blade until it finally decided to come off. The A-frame support made the washboard sit too high, so I left it off.

The remainder of the hull details are pretty straightforward. The hatches can be positioned open or closed. I closed everything up to hide the naked interior. I would not be surprised to see an after market company jump all over an interior for this kit.

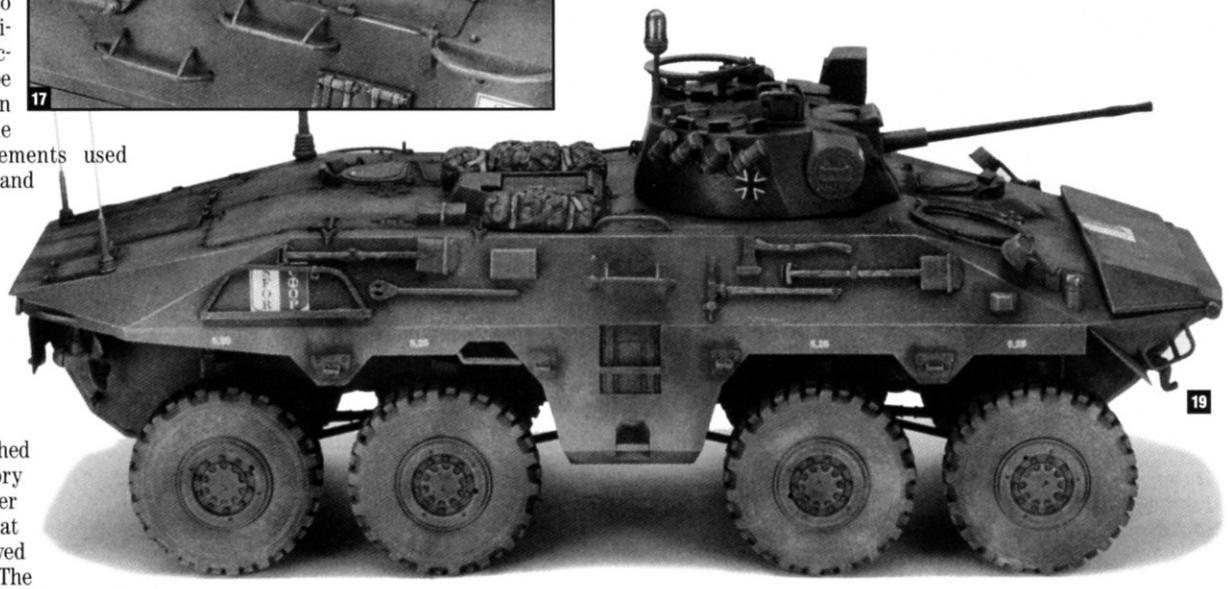
Fun up top

The turret offers the only build option in regards to an early or late version 20mm cannon. I went with the late version. The Eduard set will definitely help with the turret, especially in the area of the gunner's sight. The trick here is removing the material to accept the Eduard parts #E4, 8, 24 and 65, which will improve the gunner's sight,





#107. You have to remove material from either side of the sight in order to get #E8 & #E65 to sit right. I did this with a razor saw and file. It's real easy to remove too much material. The Eduard shell ejection port is a real treat, be sure to get it straight on the housing, #115. The other Eduard enhancements used were the lovely chains and covers for the smoke dischargers, hatch handles and release levers, vision block guards, lifting hooks and part #E15, which is the mounting bracket for the I.R. searchlight.



NATO is neato

The model was washed and primed with Armory white primmer. The under carriage was sprayed flat black and then shadowed with various earth tones. The Camouflage scheme is the standard German three tone. I used Polly S NATO Green ND NATO Brown. The black is Aeromasters Tire Black, which is more of a dark gray. The upper surfaces were first shot with the green and the brown and black were shot freehand. The entire model was washed using WN Lamplighter Black and Raw Umber. When dry, the model was dry brushed with a light Khaki to bring out the detail.

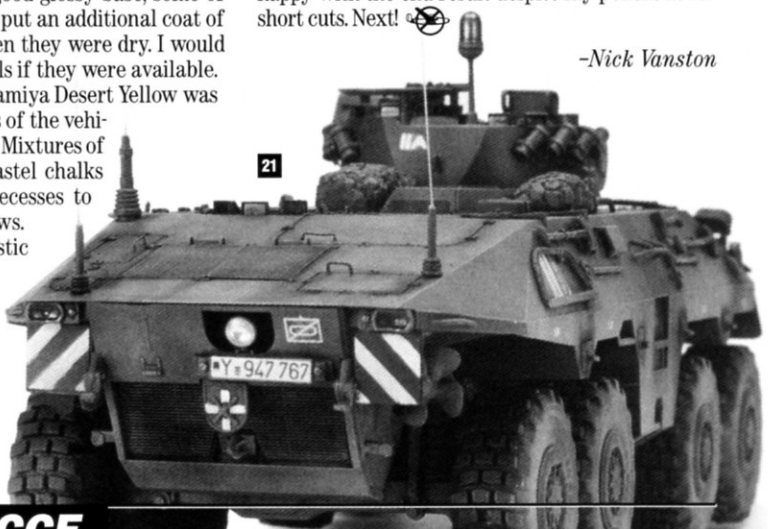
Aeromaster semi gloss was shot to give a glossy surface for the decals. I went with the marking option with the most color, "GCONSFOR Rajlovac, 1997." Micro Set and Micro Sol were used to get the decals to settle down. The GCONSFOR emblem on the right side was sliced with a sharp blade to make it look like it is behind the saw.

Even though I had a good glossy base, some of the decals silvered. I even put an additional coat of gloss over the images when they were dry. I would look at after market decals if they were available.

A thin over spray of Tamiya Desert Yellow was shot on the lower portions of the vehicle to represent road dust. Mixtures of black and dark brown pastel chalks were brushed into the recesses to further deepen the shadows.

Setting the poor plastic issue aside, this was a good build. It's not a hard model, just a little fiddly in the suspension and is well within the scope of the beginner. There are a lot of after market products starting to pop up, so the detail nuts will have options. I enjoyed building this kit and was very happy with the end result despite my penchant for short cuts. Next!

-Nick Vanston



MMiR RECCE

Spahpanzer Luchs 8x8. Revell Kit number 03036-0389. Suggested retail price $19.00.
Eduard Luchs 8x8 detail set. Kit number 35231. Kit graciously provided by the manufacturer. Suggested retail price $14.99.

References

German Wheeled Fighting Vehicles, by Michael Jerchel, Concord Publishing. ISBN #962-361-657-0. One of the better books on the subjects. Tons and tons of photos, most in color.
Jane's AFV Recognition Handbook (2nd Edition), by Christopher F. Foss, Jane's Information Group. ISBN #0-7106-1043-2. Your basic reference staple.

COMMIE POP GUN

ICM'S 76mm Field Gun

The Germans managed to sell a large quantity of the worthless 37mm anti-tank gun to the Russians before WWII. It didn't take long for the Russkies to realize they'd been had, like probably the first time one of the 37 rounds ricocheted off the armor of a PzIII. Some of the guns were rebored to the 45mm round; it wasn't much better than the original. And some of the Krautcarriages were mated to an older gun, the subject of this kit.

The Russian antecedent was the model 1927 76mm. Making use of the obsolete Pak 36 carriages, the Russians updated the M1927 with the German carriage, the result being the 76mm regimental gun model 1943. This was the equivalent of the American 75mm pack howitzer, the German ie 18 75mm, and the Japanese 70mm Model 92. And the Germans captured and used the model 1927 themselves as an infantry gun.

Construction

In common with ICM's tank kits, this is a nice fitting easy build. In fact, this is a perfect kit for a lazy afternoon, taking at the outside about two hours. There are only about 75 pieces all told, including an ammo box complete with rounds that totals 13 pieces. And there are eight expended rounds, so the gun itself only has only a little over fifty parts.

Probably the only tricky part is the gun barrel itself, parts 1 and 2. The various bands around the barrel make cleanup of the horizontal seam tricky, but nothing you haven't dealt with before. The gun shield, parts 10, 11, 12, and 27, are a bit thick, but there are several after market brass sets that, with a little modification around the thicker barrel just like the Russians had to do with the real thing, would work. Fit is very good with no problems in any of the only four subassemblies.

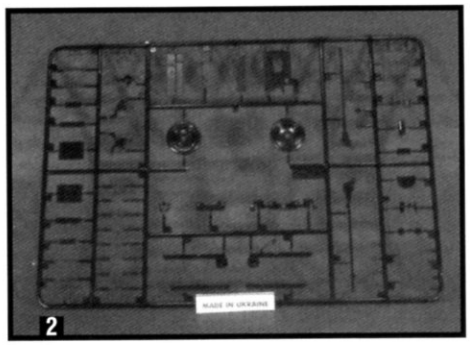
Paint

Well, you get your basic Russian dark green. If you want to be adventurous, give it an overspray of white. Wow. No markings of course.

Conclusion

This is really a beautiful little kit of an obscure artillery piece. I made it more noticeable by hitching it to the nice Zis-5 truck kit from SDS (no comparison here with the bad, but buildable Alan kit).

—Joe Morgan



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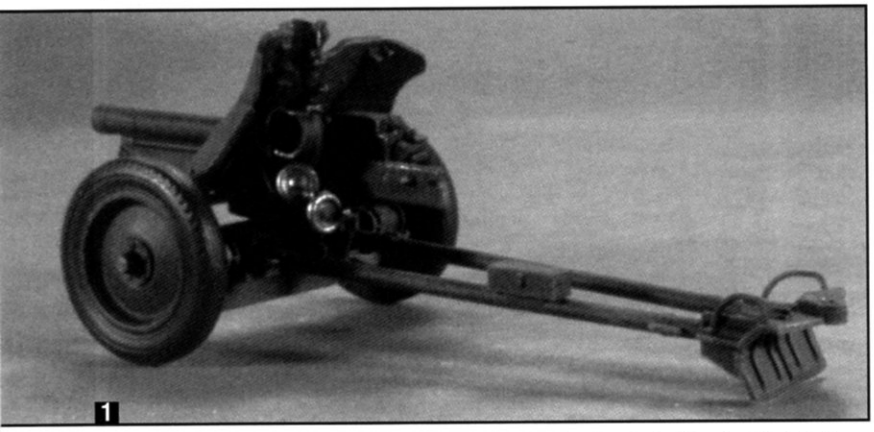
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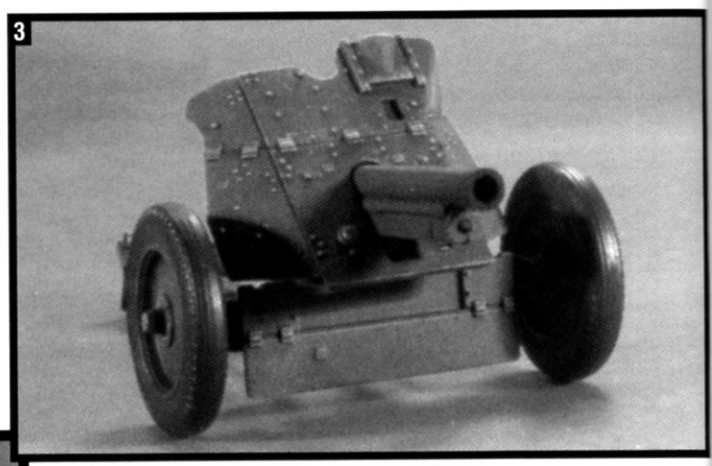
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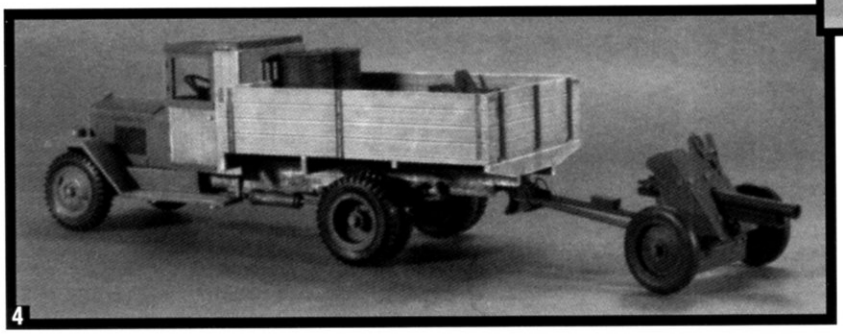
1. Left side of the gun. 2. Here's the parts tree, with its "Made in Ukraine" label. 3. Front view; again the resemblance to the Pak 36 is obvious. 4. Hooked to its prime mover, the SDS Zis-5 truck. The ammo box with its rounds is in the bed.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MMiR RECCE

ICM 76mm Soviet Regimental Gun. Kit number 35101. Kit graciously provided by the manufacturer. Suggested retail price $5.98.

References

Hogg, Ian V., *The Encyclopedia of Infantry Weapons of World War II*, Bison, London, 1977. Incidentally, this tome for some reason doesn't include the US pack howitzer, an infantry gun if there ever was one; the Marines took it everywhere.

ET 160

25

PICTURE PERFECT PANZER

It's Another Resin Weirdo From On Track

24A

25

The little Panzer 1 was already recognized as obsolete by the beginning of WWII, largely as a result of the lessons learned by the fledgling Panzerwaffe in Spain. For some unknown Germanic reason, other light tanks that owed nothing in design to the early Krupp PzIA and B models were also called Pzl. These include the uparmoured but not upgunned PzIF and the subject of this article, the somewhat uparmoured and upgunned PzlC.

This tank was meant to be a fast reconnaissance vehicle, with an eye towards airborne use, as well. The interleaved suspension and Maybach 150hp engine allowed a top speed of 50mph, very quick for the time and its armor and 20mm gun gave it a fighting chance against contemporary light tanks and armored cars. By the time production began, in 1942, the need for such a vehicle had begun to wane, and only forty or so were built. A few were used in combat.

ON TRACK'S KIT

This is a resin kit with injection molded individual link tracks. The molding of the Hong Kong made kit is very, very good indeed. However, these molded parts are attached to large resin blocks with huge casting attachments (see photo 1). By the time you get a part loose, you feel as much like a sculptor as a modeler. The parts, being mostly delicate, make the situation worse. You'll need to use lots of fresh X-acto blades and a lot of the cutting tools with your Dremel to free the parts from the clutches of the resin.

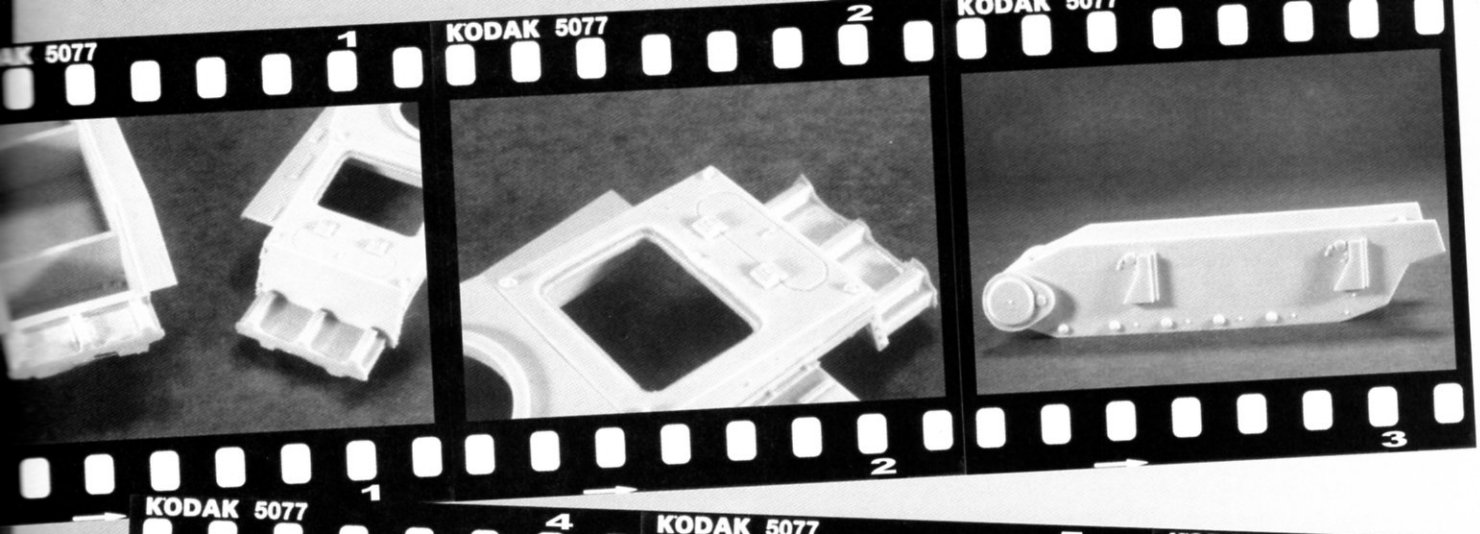
Instructions, usually a weak point in resin kits, are OK in this one with one major fault. The parts are given numbers in the instructions, but the parts don't have numbers on the sprues. What is provided is a nice clean sheet of photos of the finished model, giving us eight views and a breakdown of the parts by number on the back. So the number thing is really no big deal.

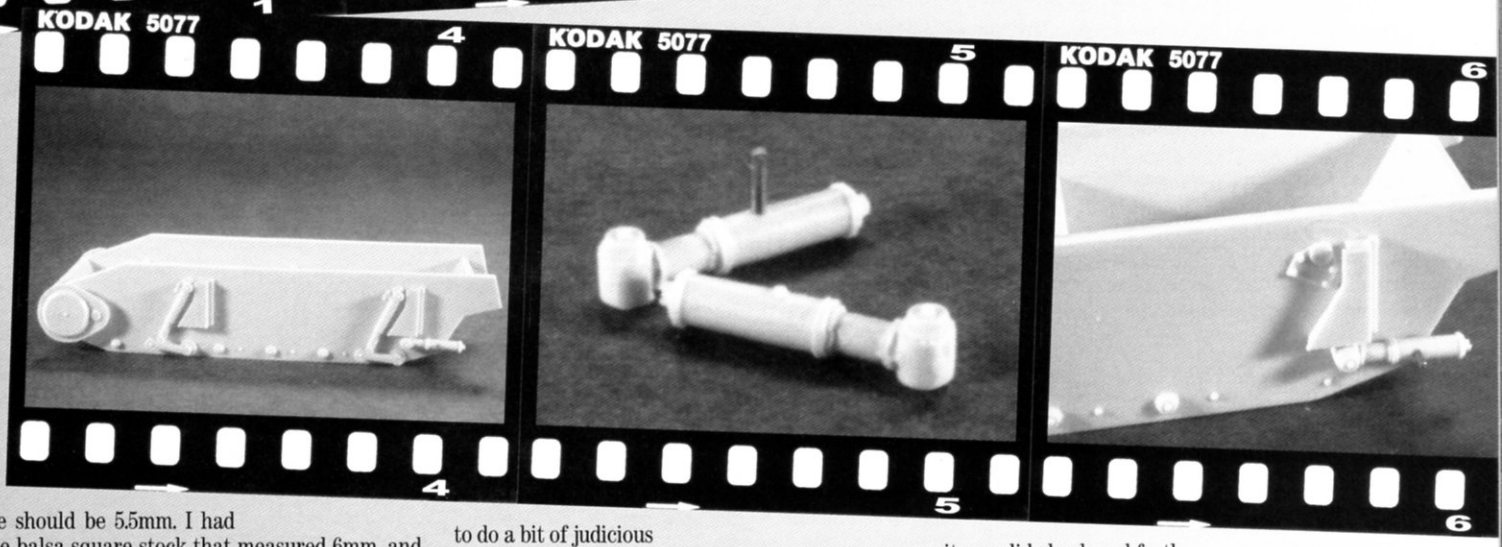
LOWER HULL

The first thing that had to be altered or fixed was the mounting of the idlers. These are mounted on round arms, and the mount itself was a tiny little blob. There was no way this would survive the fitting of the track, and besides, the idlers didn't line up with the road wheels. So I drilled the arms and the hull for a pin made of paper clip wire (see photo 7). This both added strength to the idler and made sure the whole mount would stay attached to the hull (see photo 8).

Once this chore was accomplished, I added the torsion bar arms. You'll need to do this in a certain order, though. Put on the front and rears first, the ones that have the big shock absorber working on them. (Of course, the guards that go with the shocks have to go on now, too; see photo 2. Note that they fit one way on one side and upside down on the other.) You'll notice that to get the arms to work with the shocks, they will have to be at a certain angle (see photo 3). Once these are on, line up all the arms in between with the front and rear. And don't worry; there is enough slack in the wheel mountings so they'll all touch the ground, even if there's a bit of variance in the arms.

Here's the way to make sure everything touches the ground. The plans tell you that ground clear-



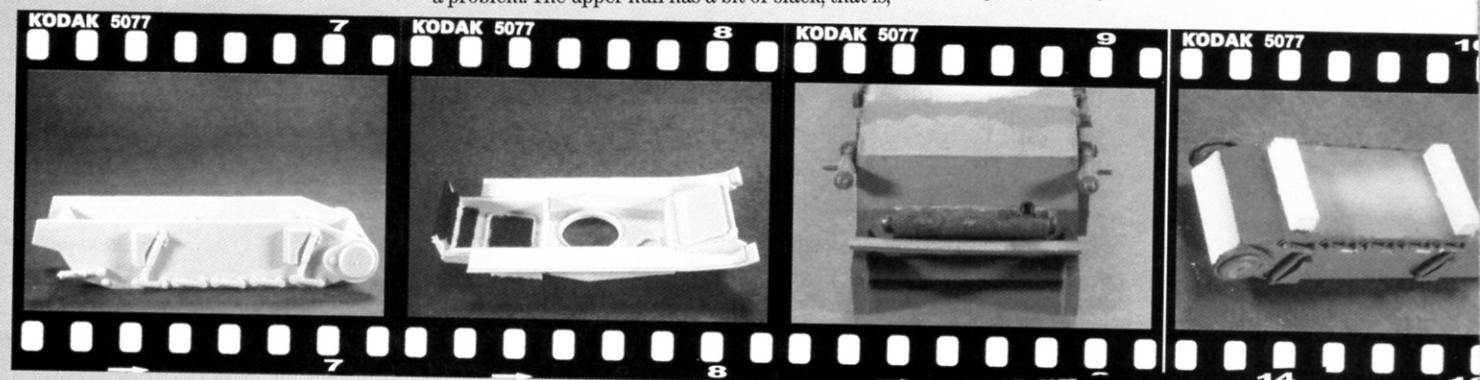


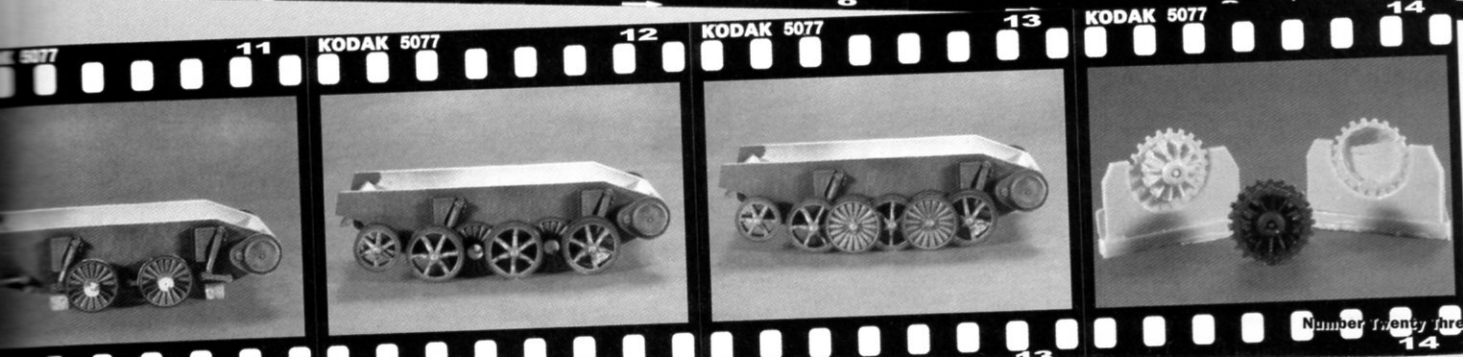
ance should be 5.5mm. I had some balsa square stock that measured 6mm, and that was close enough for me. I cut a couple little lengths of the balsa and glued them with white glue onto the front and rear of the bottom of the hull (see photo 4). Then I glued on the wheels, making sure they all touched. When the glue was all set up, I snapped off the balsa.

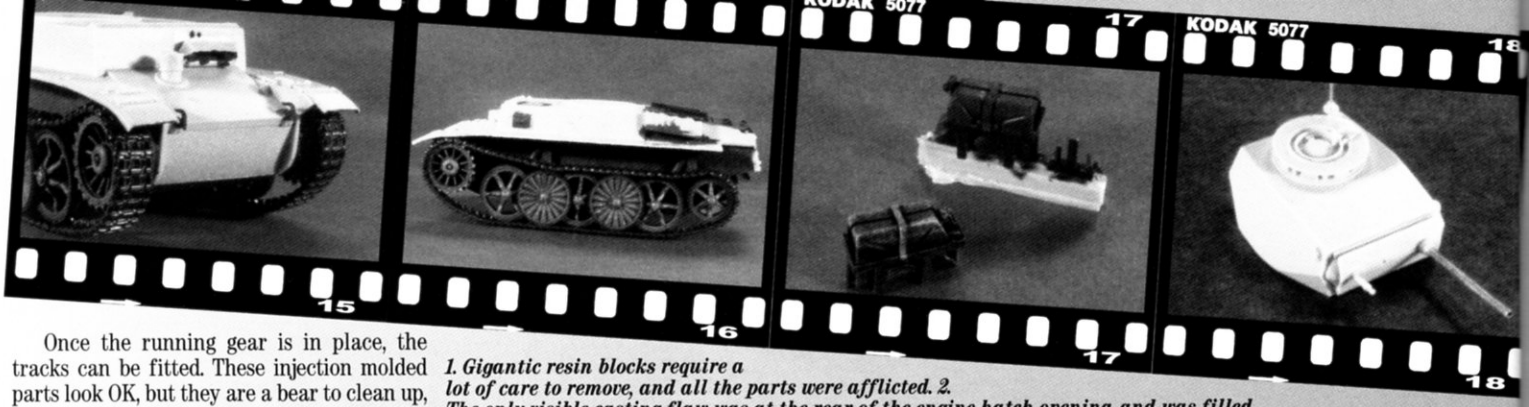
The interleaved suspension makes adding the wheels a bit tricky. Remember to put on just the inside of the 'wheel A' set (which is the 2nd and 4th station wheels; see photo 9) first. The plans just tell you to 'make 4 set'. Then add the 'wheel B' sets (photo 14) and the idler, then the outsides of the 'wheel A' sets (photo 18). And you'll probably have to do a bit of judicious carving to get the wheels to all fit together.

The drive sprockets are a real nightmare. They're enclosed in a big resin block (see photo 5) by their teeth, and the teeth are quite fragile. Trying to remove them with just a knife resulted in some lost teeth, luckily all together so I could hide the gap with the tracks. On the other sprocket, I used the smallest ball cutter and my Dremel to carve the resin away. Only lost a couple teeth on that side. The fit of these parts to the tracks was not particularly good, and some teeth had to be worked on to get the track to fit at all. I thought this sucked.

In trial fitting the upper and lower hulls, I spied a problem. The upper hull has a bit of slack; that is, it can slide back and forth on the lower. If you slide it all the way forward, the upper overhangs the lower by a little, but fits well at the rear. If the upper is all the way to the rear, the front of the upper sits flush with the lower, but there's a gap at the rear. The problem is that the front must be flush, as the two parts 51 and 52 attach to the lower hull but fit on the edge of the upper hull (see photo 10). I decided to go for the good fit at the rear, and shim out the lower hull with a piece of .015 Evergreen cut to fit the lower hull front (see photo 4). When painted, it's invisible, and since the area affected is flat and rectangular, it's easy.







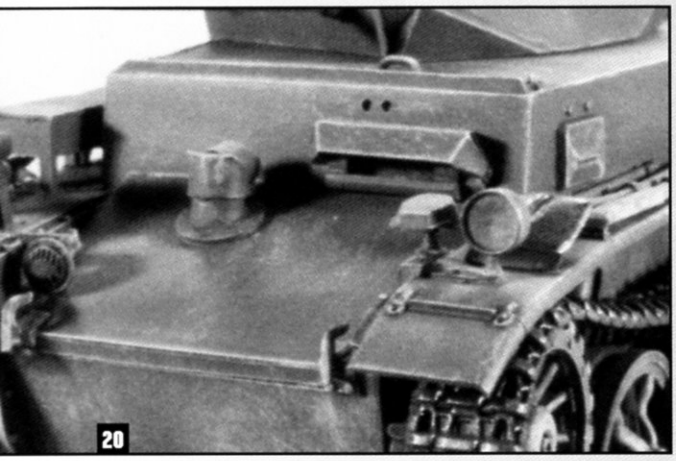
Once the running gear is in place, the tracks can be fitted. These injection molded parts look OK, but they are a bear to clean up, being small, and you must clean them up or they won't fit together. Close examination reveals the molds are misaligned just a touch, and the small flashy edges won't let the parts mate until cleaned up. This is a real pain. The three attachment points have to be cleaned, and then the area where the flash is also must be cleaned. Figure at least a couple three minutes for each shoe, and there are about eighty-five shoes a side. That's a lot of swipes with an emery board and file.

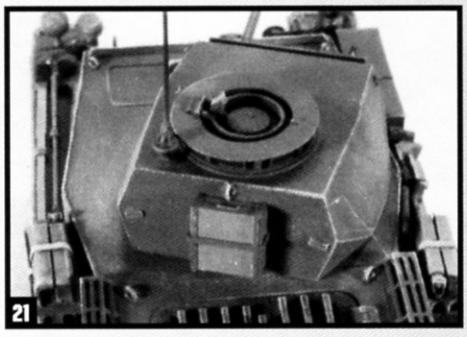
Before the tracks, the lower hull was painted and drybrushed. The exhaust system and its guard (part 45) should go on before the tracks, too. This isn't completely necessary, but it's easier this way (see photo 13).

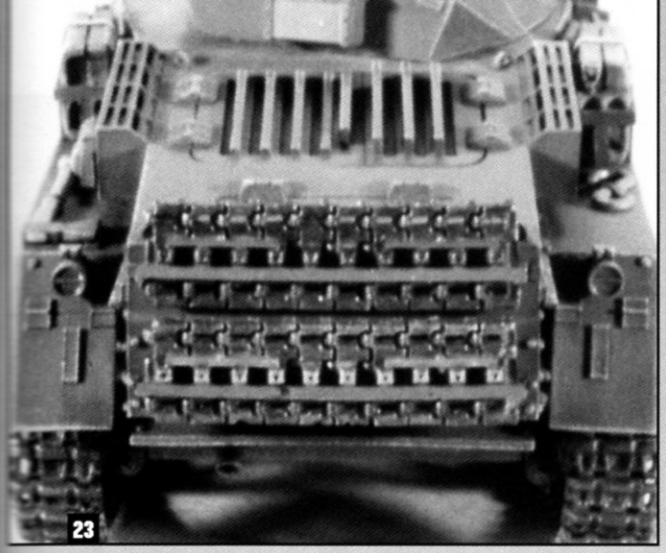
UPPER HULL

The only casting flaw visible is at the rear of the engine hatch opening. The mold had shed a bit of casting rubber here, and it had to be picked out and filled (see photo 6). The openings for the engine hatch and the driver's hatch should be painted black before the parts are added, as should the underside of the engine air outlet and the engine hatch itself (see photo 17). This thing is a piece of cake when you get to this point. All the parts fit well; the only gremlin being the inordinate amount of time you'll spend carving away the excess resin. (Someone once asked a famous sculptor how he could sculpt a horse from a

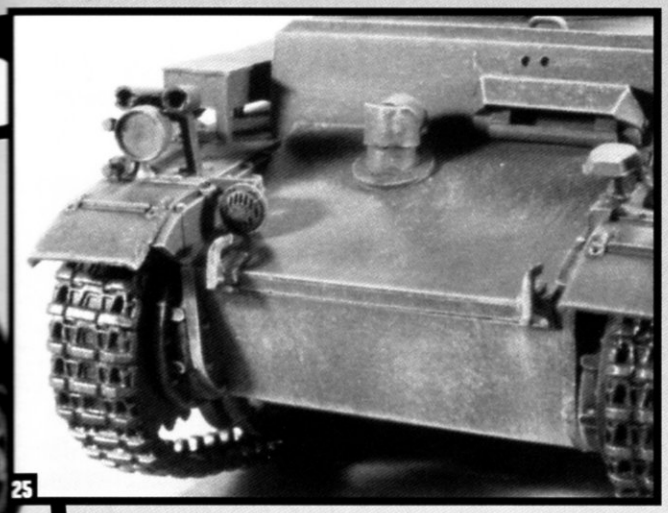
1. Gigantic resin blocks require a lot of care to remove, and all the parts were afflicted. 2. The only visible casting flaw was at the rear of the engine hatch opening, and was filled with putty. 3.&4. The shock absorber guards fit one way on one side, and upside down on the other. 5. The idler mounts were completely inadequate as supplied. They and the hull were drilled for a wire pin. 6. The pin goes through the idler mount and into the hull, providing a secure mount. 7. The proper angle for the torsion arms is established by mounting the two on each end that connect to the shock absorbers. 8. The underside of the hull under the engine hatch and the rear overhang should be painted black. 9. It's easiest to install the exhaust system before the road wheels and tracks. 10. Here are the two balsa blocks white glued onto the lower hull to set the height of the chassis. Visible here is the .015 Evergreen plate on the hull front. 11. First to be installed are the insides of wheel set "A". Visible under the hull are the balsa blocks. 12. Next to go on are the wheel sets "B'1 and the idler. 13. Now the outside of wheel sets "A" can go on. Once this is done, the balsa blocks can be removed. 14. In the foreground is a completed and painted drive sprocket. In the background, the two parts of the sprocket yet to be separated from the resin. 15. Here the tracks are on and the upper hull installed. Note the white Evergreen sheet visible on the front plate, and the parts 51 and 52 that necessitate the Evergreen. 16. The upper hull installed, with priming visible on areas that spraying has difficulty reaching. 17. In the foreground is a completed jerry can and rack completed; in the rear is one still in the embrace of the resin. 18. The assembled turret. Nothing tricky here, but the resin gun barrel was junk and had to be replaced with brass tube.







19. In this shot of the front the nice casting on the siren is typical of the parts in the kit. 20. Tow hook detail and fender hardware along with headlight and Notek shown here. 21. Overhead shot; the turret offset to the right is one of the very few features this derivative shares with the original. 22. Right side, completed vehicle. 23. A large array of spare tracks mounted on the hull rear. Might the crews have wanted them on the front? 24. Tools on the left side. All fit onto the hull brackets perfectly; some might add brass. 25. Note the wire cutters, fitted to the smoke discharger bracket and under the toolbox. 26. Gas can and tools on the left rear. The jack block is mounted on the turret rear, a very rare mounting spot. 27. Turret detail; the machine gun was very nice, but the main 20mm barrel was junk and replaced by brass tube. 28. The downward slanted fenders seemed to have little support, but turned out fairly sturdy.



block of stone. "Easy," he replied, "Just carve away everything that doesn't look like a horse." Substitute 'tank parts for 'horse' and you've got this kit by the balls.) Since I spent an interminable time cleaning up the tracks and fitting them, I amused myself by painting and finishing the large amount of stowage carried, as well as parts like the driver's hatch, the engine hatch, and the air intakes. One of these fit perfectly, the other had to have the mounting pins removed to allow it to fit properly.

The upper hull was primed (in spots where it's difficult to spray), painted and marked with crosses from my spares. Reference photos showed only the crosses as markings. Drybrushing followed, then the stowage was added. Fit on all this was quite good, aided by attachment points molded to the hull.

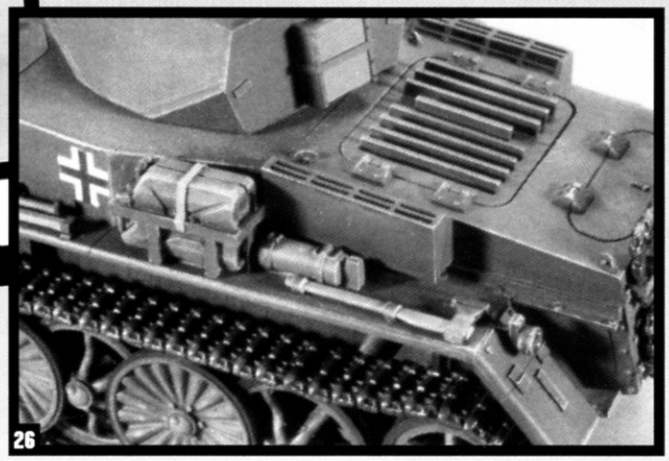
TURRET

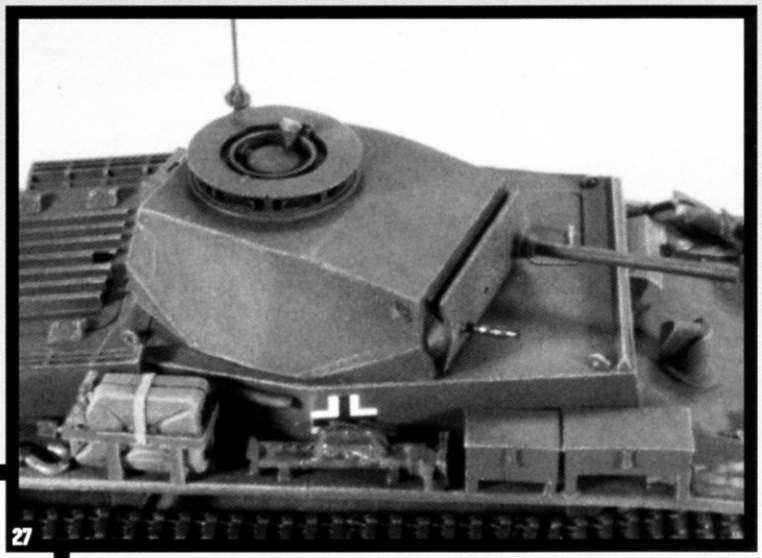
This assembly was easy and straightforward. The main gun was totally ridiculous, marred by casting flaws and as crooked as a dog's hind leg. I substituted brass tubing, as this gun had no muzzle brake. The antenna is stretched sprue.

CONCLUSION

The finished model is very nice, but this is an exasperating build because of the mold problem with the tracks and the huge resin blocks. However, it's the only kit of this rare German beast, so you Teutonophiles will just have to gird your loins, crank up your Dremels, and set to.

—Joe Morgan





MMiR RECCE

On-Track Panzer I Ausf. C. Kit number OT3507. Kit graciously provided by the manufacturer. Suggested retail price $90.00.

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Encyclopedia of German Tanks of World War Two, Chamberlain, Peter and Doyle, Hilary, Arms and Am our Press, London, 1993.

German Tanks of World War Two, Forty, George, Blandford Press, London, 1988.

German Tanks of World War II, Von Senger und Etterlin, F.M., Galahad Books, New York, 1969.

Mini-Men

A Peek At What's New On The Figure Front

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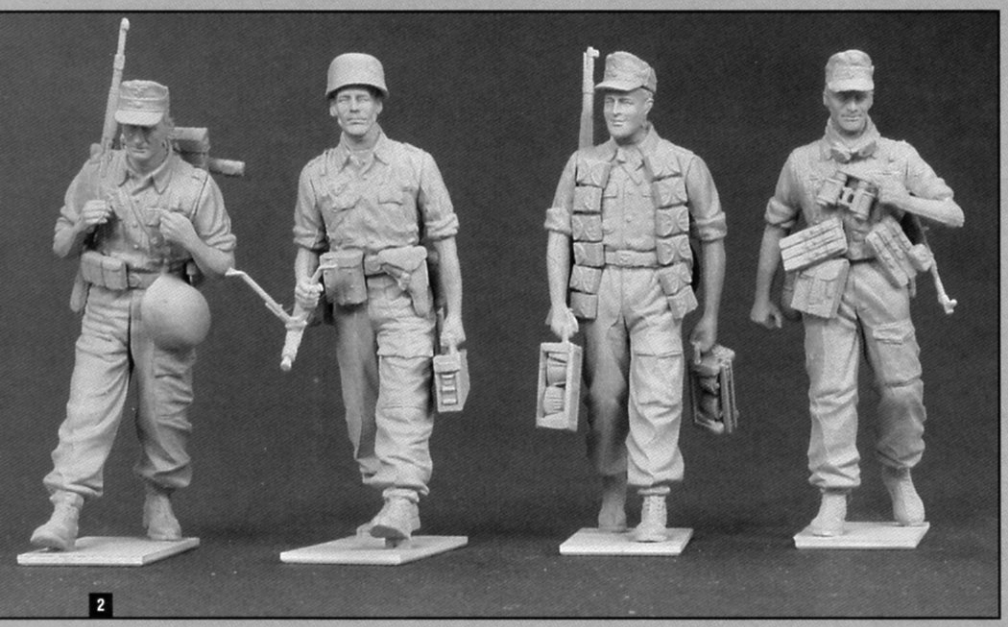
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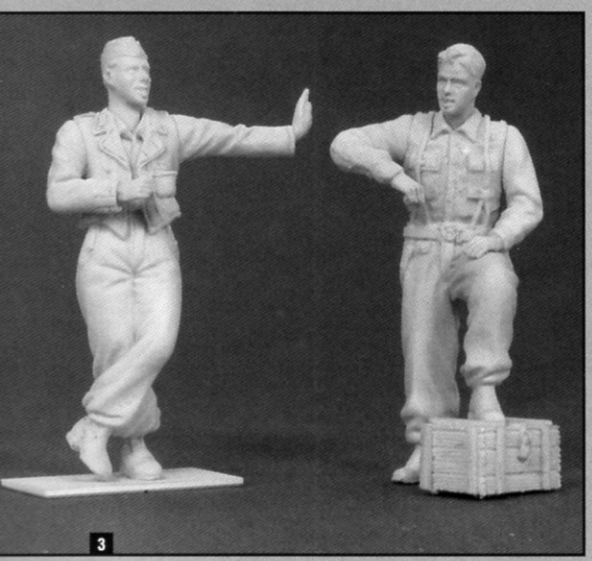
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Welcome to the largest Mini-Men in the history of the world! More singles, duos, trios, quartets, and bases, heads, some minibikes (sorry) and even a few women thrown in for good measure. Come on in, pass the jug, and set a spell.

Dragon

Another fine pair of injection figure sets this time around. We love 'em. We want more of 'em.

6129, Survivors, Panzer Crew (Kursk 1943) (1), is one of Dragon's simplest and most dynamic sets. Included are four Wehrmacht tankers in the black panzer uniform, having recently departed a mortally wounded tank. Two men fire their weapons at Ivan, while a third helps up his wounded buddy. Two are bareheaded and the other two wear the black Feldmütze, which is a separate piece. There's a small array of small arms included. You definitely don't want to miss this one.

6142, Ramcke Brigade (Libya 1942) (2), has four para types traipsing across the desert sands. This set is absolutely brimming with dozens of pieces of separate equipment, including a pair of MG42 drum carriers. And you know how hard those are to come by (don't you?). All four wear the large tropical trousers and have canvas tropical gas bags and the detail abounds. And since there aren't that many walking figures in desert garb, it's a must have.

Dynasty

These guys from Korea debuted in the last issue and they're back with four more sets.

35004, German Tank Crews at Rest (3), depict two tankers chilling out. One is bareheaded, with an elbow on the AFV with one foot up on a crate. His pal is casually leaning, holding a canteen cup and his Feldmütze insignia makes these guys SS. Good poses.

35005, U.S. M8 Greyhound Crew (4), present a pair of our boys ready to hop aboard the Tamiya and Italeri kits. Both wear steel pots and the winter combat jacket plus canvas leggings. One is posed with his leg up on the turret, the other to fit inside the ring mount. Dig it.

35006, "March! March" (SS Grenadiers at Bulge) (5), is a novel choice; depicting two of the fatherland's finest apparently jeering at a

passing group of U.S. prisoners. The base includes several pieces of cast off GI gear and on the box the one fellow has our colors over his shoulder. If you're not into showing our guys losing, this could be painted as a blanket. One wears the late pattern camo smock and the other the 1944 camo tunic.

35007, Totenkopf Tank Commander and Riders (6), is a trio of figures based on an oft-published wartime photo. Two winter dudes in the 'Kharkov parka' are designed to fit onto a PzKpfw. IV, one cradling an MG42 and the other with rifle. The third figure is the tank commander, wearing the Einheitsfeldmütze with full headphone assembly and all wires cast down the front of his body. A small inset of the actual photo is included on the box.

Jaguar

Jaguar has it all this time around and this is one of their largest offerings ever.

63114, "At Your Service," (7) has a German officer bowing in a sweeping gesture as he opens the door for a European woman. She carries a clutch bag and even has a fox stole wrapped around her neck. He has no eagles on his tunic and might be a government, administrative, or Volkssturm man. They're a dynamic duo and will look great on your next dio, heading out for a night on the town.

63115, "The Dispatch," (8) is an excellent pair of SS men (note the belt buckles) in early pattern smocks. We like 'em so much that we brought back our Italeri BMW to show them off. The standing SS man leans in with the latest directive, while the driver is turned back to take it. Both are bareheaded. The set also features s replacement lid for the stowage compartment in the sidecar and a rolled tarp. Neato.

63116, "Nylons," (9) features a Willys Jeep driver offering a pair of nylons to a local gal. This is a great pair of figures to form a neat vignette or a side story in a larger diorama. Nylons did a lot for international bartering 'over there' and this is a cool idea.

63117, Vietnam Tank Crew (10), brings one full and one partial figure for your latest 'Nam AFV. Both are bare-armed under their flak vests and wear the CVC helmet. They're a little too relaxed to be under fire, but look great paired up with the next set.

63118, US Infantry, Vietnam (11), features two hardened grunts on their way in to the shit. One is bare-chested (not all that

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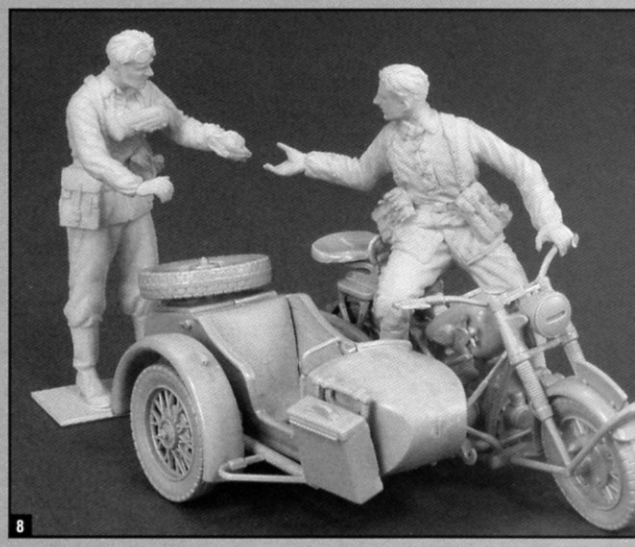
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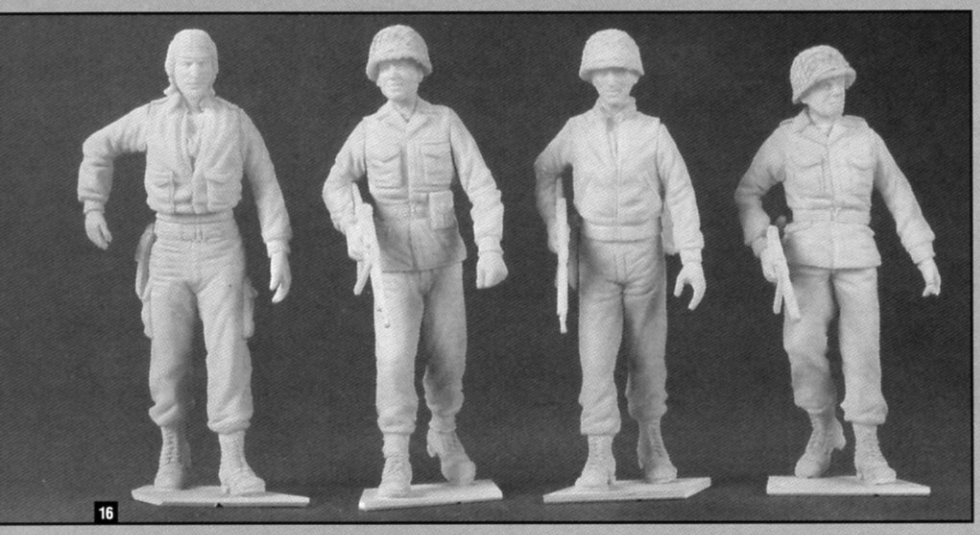
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common or very smart), wearing a boonie hat and sporting a bandoleer, twin canteens, M16 and early canvas ammo pouches. His (smarter) companion wears a flak vest, .45, canteen, and helmet with cover and bug juice and is humping a '60 with the ammo belt wrapped around. Both wear jungle fatigue trousers and jungle boots. These dudes are bitchin'!

63119, House to House (1) (12), depict a highly animated Wehrmacht pair charging into the fray. (Interestingly, the officer is wearing SS insignia on his cap.) Both are fully geared; the officer is replete with flashlight, binos, PPSh and ammo pouch, and map case, and even has a Soviet pistol stuck in his belt. His unterbuddy is holding forth a Kar98k and wears ankle boots and a full combat load on his back. These guys are getting after it and are designed to go with the next pair.

63120, House to House (2) (13), are a companion pair for 63119. A Wehrmacht MG42 team is going full bore. While the sprinting ammo bearer springs forward with ammo can, rifle and full field gear; his less fortunate companion is getting whacked. The gunner's MG and helmet are cast separately and he is sculpted in an extremely realistic pose. Pick your Eastern or Western front and get these guys in place.

63121, "A Helping Hand," (14) would be your Pick of the Month if there were a Figure of the Month Club. Here's a healthy pair of Wehrmacht lads boarding a tank. A Tiger is shown in the box art, but they'll fit anywhere there's a flat surface—including a windowsill. The NCO with the MP40 has a right hand, which is actually cast onto the other man's arm, ensuring a perfect fit. These are some righteous dudes, and you should rush right out and get 'em.

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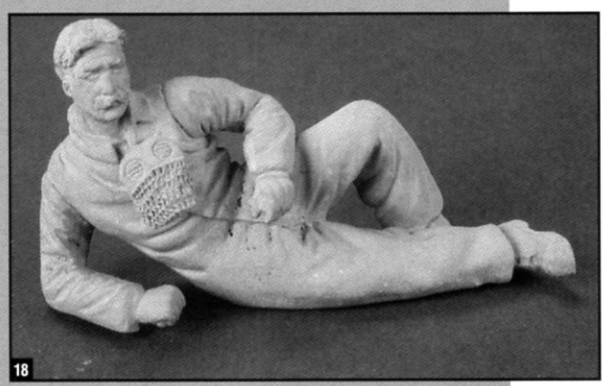
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63122, Tiger Crew (15), are a four-man set featuring two complete figures for the turret hatches plus a partial driver and partial radio operator. The latter two feature cast-on headsets and the radio operator even has a mike in his hand. There's a most excellent mix of uniforms here: leathers, overalls, standard tanker tunic, and pea pattern, plus shirts, turtlenecks, scarves, and gloves. These boys are ready for action in late fall, early winter, or spring and make an instant classic from Jaguar.

63123, "Kelly & The Entrepreneurs," (16) is definitely one of the highlights this

issue. It's about time somebody did these guys! The likenesses are sharp, particularly Oddball, and you also get Kelly, Crapgame and Big Joe. All you need now is a bank to show them off. "Kelly's Heroes" even has a cult following on the web and these are going to be popular figures.

63125, "Hey, There!," (17) is one of the good guys trying to win a heart and mind. He wears a headscarf, tiger stripe fatigues, a full ruck (the best ruck we've ever seen, complete with frame!) and holds an M16. The object of his attention is a lovely young thing, reaching tentatively towards him and is beautifully rendered. If we're not mistaken, she's a Sagittarius, too.

LSA Models

LSA, from England is finally getting some exposure in the U.S. If you're having a tough time finding WWI figures, here they are, in white metal.

3501, WWI Tankie Lying on side (18), is a chap in overalls reclining. **3502, WWI Tankie Seated (19)**, is another fellow in overalls, ready for a book or newspaper. **3503, WWI Tankie Relaxed Pose Leaning (20)**, is a balding older fellow holding his helmet. **3504, WWI Warrant Officer Holding Bottle (21)**, is in puttees with one leg up, holding a bottle and a slice of bread. **3505, WWI Officer in Puttees (22)**, has a plate of grub and a cup of char.

All these blokes would be the perfect companion to your next Mark IV or Whippet.

Precision Models

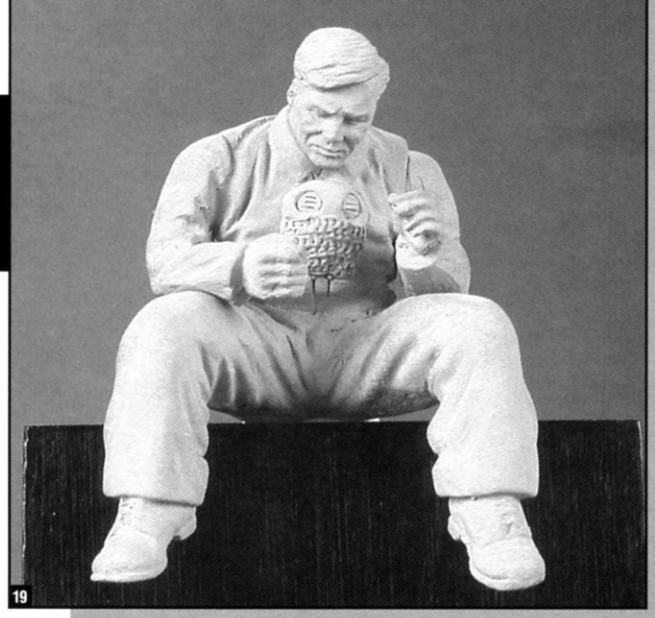
These boys from Belgium are getting a strong rep for their kits. And occasionally, a figure.

35042F, Fliegerhorst Dec. 1941 (23), is a solo figure in overcoat, toque, and Feldmütze, ducking out for a smoke. Other than the tiny eagle on his cap, there's nothing here to say he has to be Luftwaffe. He's a winter dude with his coat buttoned over and an all around cool piece.

Sol

We noticed Sol a while back when they began producing some truly stunning large-scale fantasy pieces. Now they've stepped into the 1/35th arena, with fine results.

3002, U.S. Sniper, Grenada (24), is one of our boys getting into position on a rocky outcropping. The BDUs are dead-on.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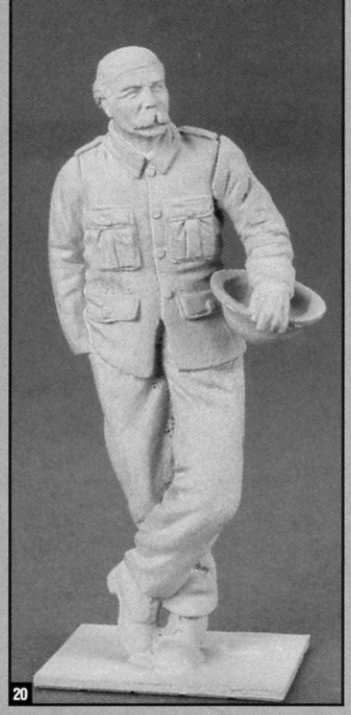
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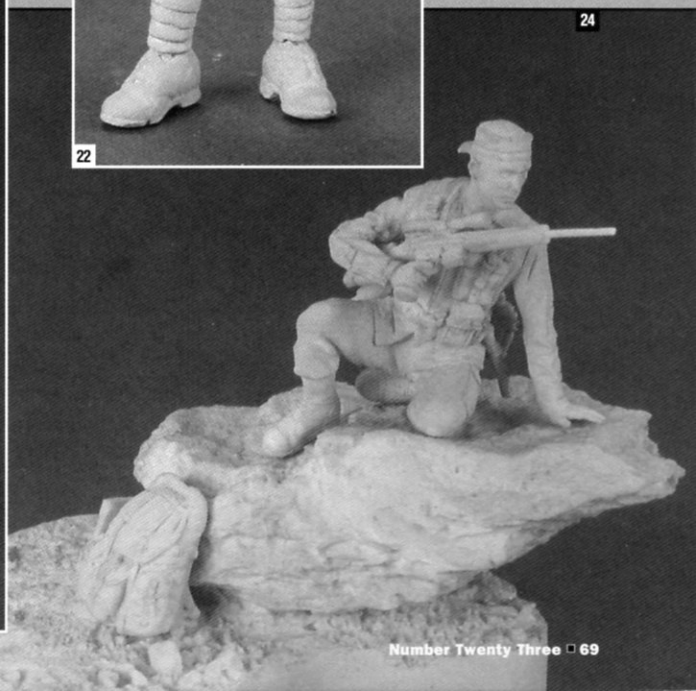
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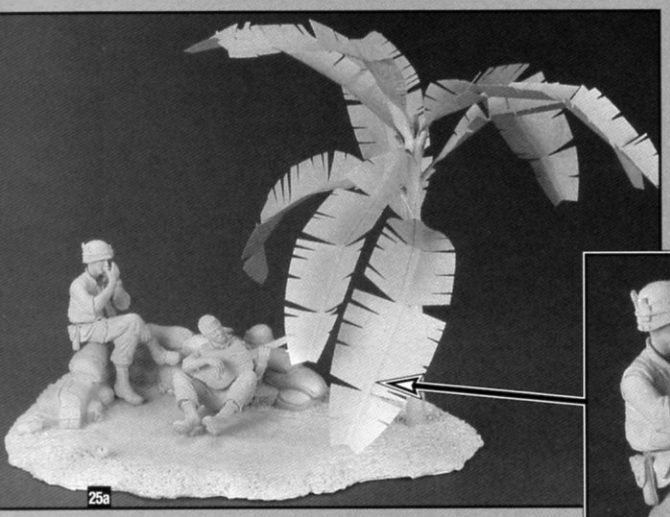
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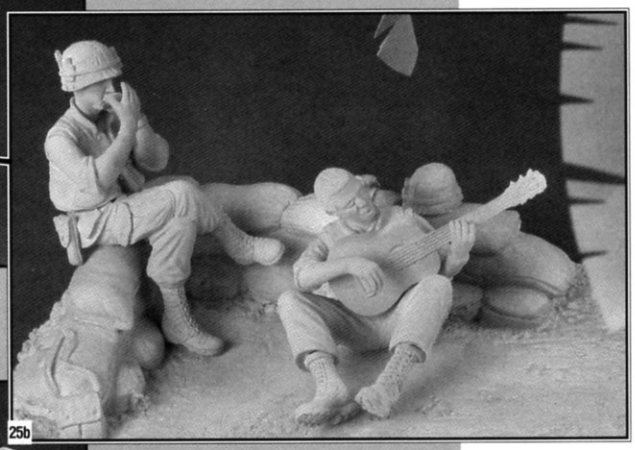
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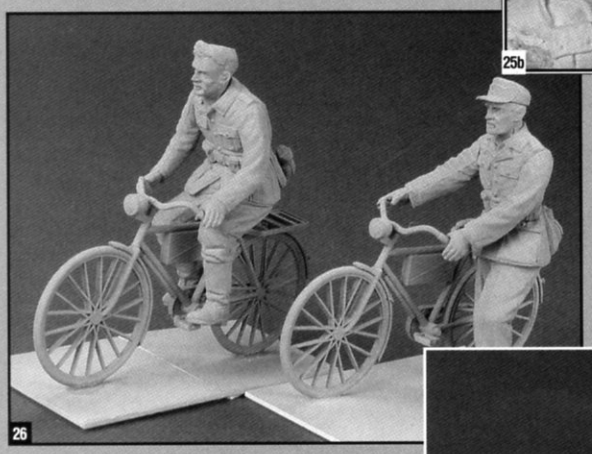
He's dropped his ruck and is crawling atop a handy little base that makes for a nice stand-alone figure. The LBE, canteens, ammo pouch, and cap are all captured perfectly.

3070, U.S. Marines at Rest/Vietnam War (25), is a handy little vignette with two 'Nam-era grunts taking a breather. Both wear flak vests and jungle boots. The sitting man strums a guitar, while his companion plays a harmonica. (We believe this is a first.) The base includes an integral sandbag wall with more goodies molded on, plus a separate palm tree with photo-etched leaves. It's a catchy little vignette.

Tamiya

A new figure set from Tamiya is always a treat and we're pleased to have not one but two this time around.

We've all been scarfing up those neat little bagged bicycles for years. It was first issued in Japan in 1991 with a standing figure, and now it's a full set. **35240, German Soldiers with Bicycles (26)**, includes two sprues of the original issue plus another sprue with one riding cyclist and one who's walking the bike. So, you get two bicycles plus two new figures plus the two original standing guys (who aren't even shown on the box) and a whole handful of equipment like canteens and gas canisters. Dig it.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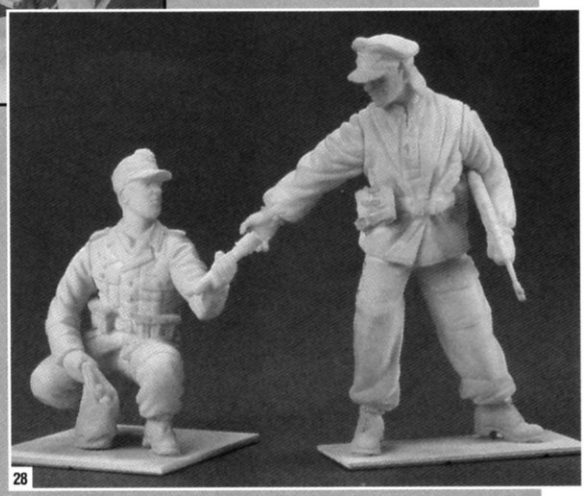
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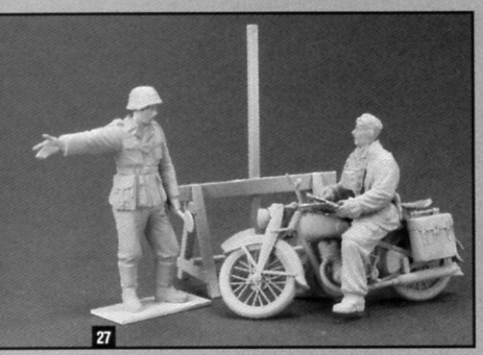
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Last year the Big T released their DKW NZ 350 motorcycle as a bagged item and modelers everywhere swooned. At long last the 'big three' of German cycles was complete. Now it's all boxed up and in the permanent military series as **35241, German Motorcycle Orderly Set (27)**. The sweet little 350 is on one sprue and the second sprue hosts a rider, Feldgendarme and a movable barricade with signposts. The SS rider is in late pattern smock and includes a choice of two heads. The Feldgendarme has the appropriate gorget and traffic sign. Printed on the side of the box are nine road signs for the Normandy area. Gotta gotta have it.

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Warriors

There's a lot of lovin' from Warriors this time at bat.

35315, Hermann Goering Troops (28), is a nifty pair of desert troops. The kneeling figure is holding a grenade bag, and passing a

pair of potato mashers to his standing compadre. The upright figure wears a camo smock and the distinctive 'Hermann Meyer' cap, with Luftwaffe insignia and the oversized brim. He's also got a sun scarf tucked in to protect his neck.

35316, FAMO Crew (29), is a trio of Wehrmachters sculpted to fit specifically into—anyone? anyone? Right!—the Tamiya FAMO. They're all in padded winter trousers and a broad range of other garb, including a driver in fur cap, a standing officer in Schirmütze and field tunic, and a seated passenger in leather jacket and sheepskin vest with his arm in a sling. If you just want wounded boy, he's available separately as 35329.

35317, FAMO Crew #2 (30), is another pair to fill out the—guess again?—FAMO. They're a casual pair, seemingly chatting it up. Both wear winter jackets and the guy with his legs crossed is particularly keen.

35318, Italian Tank Crew (31), is long overdue. It's a standing trio of three full figures, all wearing double-breasted Italian leathers. Two are posed to fit into the hatches, and a third is coming along with a jerry can.

Two new headsets are also in circulation. **35320, Israeli Head Set No. 2 (32)**, provides six Israelis in infantry helmets, while **35321, German Head Set No. 33 (33)**, has all four heads in panzer berets from 35311, plus the Hermann Goering dudes in 35315.

35322, Wehrmacht Tanker Looking at Map, is such a nice figure that you'll have to flip to The Model Citizen to check him out.

35324, Russian Tankers at Rest (34), depicts a sharp pair of fellas clad in canvas overalls. The sitting tanker is perched on a crate, his cheeks bulging with chow. He's motioning towards a helmet full of eggs plus a board with bread and sausage. His standing buddy holds a cup o'joe and has a large head bandage. A nice feature is the tanker helmet slung to the rear of his belt.

35325, SS Grenadiers 1941-45 (35), is a trio of action figures ready to spring onto your latest diorama. All three are attired in early pattern smocks. The officer is brandishing a fresh magazine for his MP40, and might just be one of the best figures Warriors has ever produced. The crouching man holds a Kar98K rifle, while the third figure is reloading or gripping his MP38, depending on how you

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position him. Niiiiice.

35326, Wehrmacht Tanker Walking With Rations (36), is a Wehrmacht tanker, walking, with rations. His jacket is open exposing his turtleneck, while he carries three mess tins in his left hand and a finely balanced load of bread and cans in the other. Just the thing for your next set of hungry Panzertruppen.

35327, Hitlerjugend Normandy/Mini Vignette (37), introduces a pair of resting SS on a base. Both are bareheaded, and look appropriately weary from the day's pillaging. The seated figure is wearing the camo coverall, while the standing man wears field tunic and Italian camo pattern trousers. A pair of helmets and ammo cans are also included, along with a road sign.

35331, SS Pair—Winter Dress (38), brings a sweet pair of combat types in full winter garb. The crouching officer holds binoculars and is waving the troops forward, while the standing figure crouches forward reloading his PPSh. Both are clad in the reversible padded winter uniform, so pick your color.

35334, American Tanker (39), is a solo figure wearing the winter combat jacket plus canvas leggings and tanker helmet. He's designed specifically to have his right leg up on the mantle of your latest Sherman.

Warzone

We gave you a peek up front in the last issue, and here he is again. These guys are another new figure line, this time from Singapore, and they're going with white metal. Their first releases is **3501, Commonwealth Soldier, Burma 1943 (40)**. He's a sharp looking chap in gaiters and field uniform, with his bush hat properly turned up. He's holding a machete down by his side. A Webley in canvas holster is also included, plus a small base with a stump and a smattering of leaves. We also like the fact that the box has a front view label on the front, and a rear view label on the rear.

The respective manufacturer or U.S. distribution agent submits all figures reviewed in the Mini-Men section. Inquire at your favorite retailer for availability.

Radical 8-Rads

The Sdkfz. 234 Series: 234/1, part 1 of 4

Based on the reasonable success and popularity of the Sdkfz. 231 and 232, a new breed of German 8-wheeled heavy armored car was launched in 1940. The new version had improved frontal armor and heavier hull design. Designated the Schwere Panzerspahwagen Sdkfz. 234, this new series did not reach production until late 1943. First to roll out was the Sdkfz. 234/2 (with enclosed turret and the only one in the series with a nickname - 'Puma'). Next came the 234/3 (open top, short barreled 7.5cm KwK) and the third was the 234/1 (with 2cm turret similar to the Sdkfz. 222 armored car). Finally, it was the 234/4 (open top, long barreled 7.5cm PaK 40). Italeri remains the only injection company to tackle these vehicles, producing the /2, /3 and /4 back in the dark ages and finally releasing the /1 in 1997.

The Sdkfz. 234/1 was the most widely produced of the four; 200 units were manufactured between June 1944 and January 1945 and served on both Eastern and Western fronts in armored recon units attached to panzer and Panzergrenadier divisions.

The overview

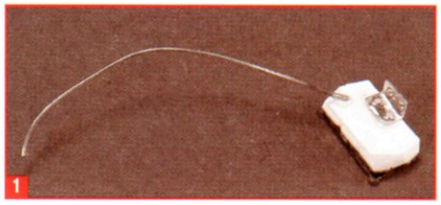
With the Italeri kit in hand, there are now sufficient detail sets to tackle the 234 series. Eduard and Aber have both released etch sets specifically for the 234/1 and Aber has also produced a generic detail set featuring bin doors and other goodies. If you can swing the budget, get all three, for there are unique parts in each as well as some overlap. A Jordi Rubio barrel, new wheels from The Tank Workshop and it's off to the races.

Down and out

There are amazingly few photos of the 234s, probably owing to their relatively late introduction to the war and low numbers. Fortunately Darlington Productions and Thomas Jentz have written a fine book centered on the few remaining vehicles and provide ample detail photos to do it up right. The project commenced with the lower hull exterior. Tank Workshop wheels each received a valve stem from brass wire. As evidenced in the photos, there are dozens of rivets and bolts everywhere, which were punched from sheet plastic. Additional bracing was added to the upper suspension mounts and riveted detail was added to the front bumper bracket. Flexible tubing was used to replicate the hydraulic line for each of the eight wheels. Using the Darlington photos, this took surprisingly little time and suddenly the lower hull exterior had 170 add-ons.

In we go

I puzzled with the interior for a bit, as it would be virtually invisible once the vehicle was finished. I finally decided that if I left the turret deck plate unattached, it could be lifted off to see the yummy goodness inside. So, in I went. Aber's auxiliary set features interior door frames and latches which are an absolute must, as the kit lacks any interior door detail whatsoever. Aber also provides the left-side lever mechanism for both front and rear drivers. Seats were dug out of the parts box from a 234 of long ago and which were already covered with tissue for a more worn look. The Darlington photos also show the transmission housing which is highly evident in the floor next to the rear driver. I pieced this together from a dozen chunks in the spares box and thought how some enterprising after-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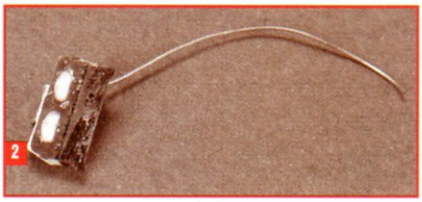
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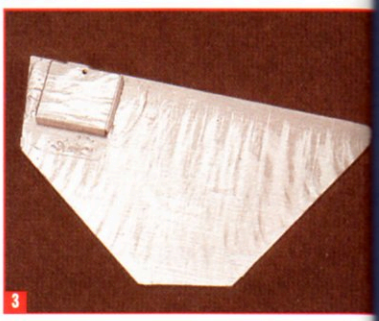
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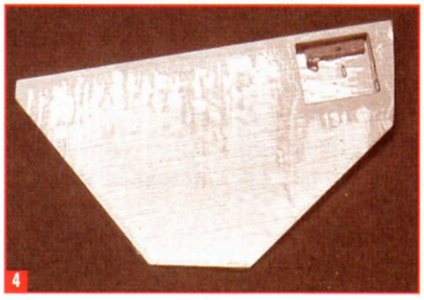
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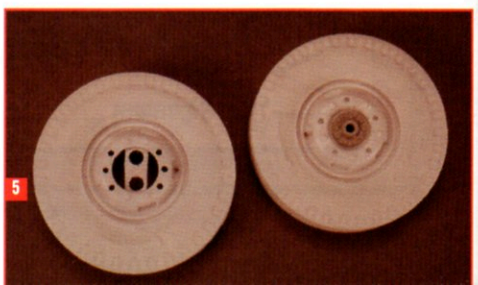
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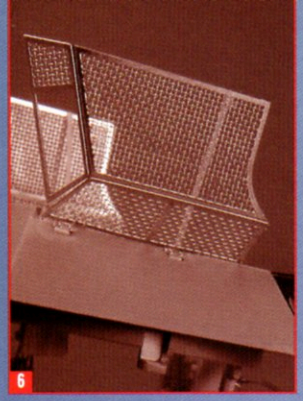
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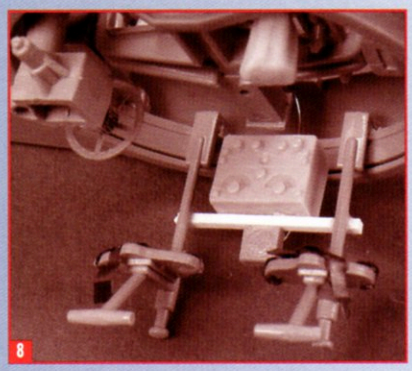
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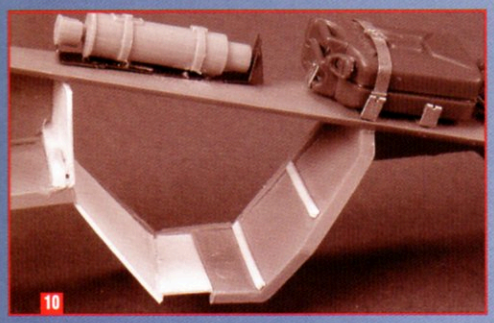
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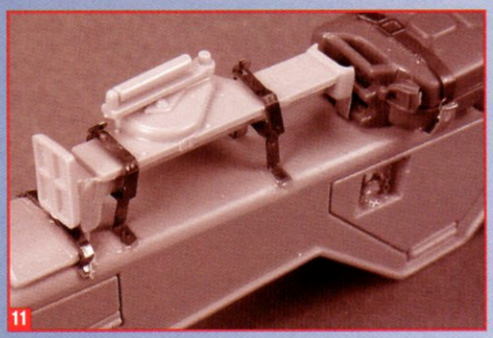
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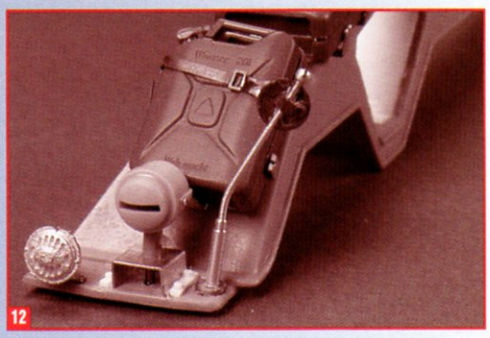
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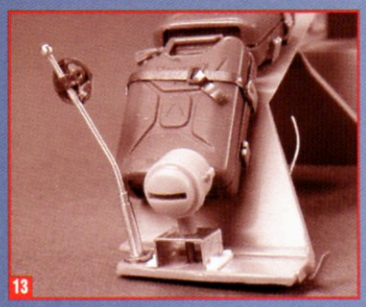
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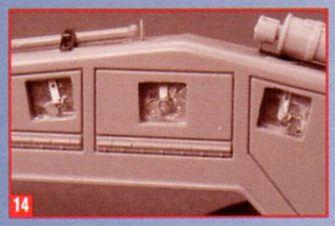
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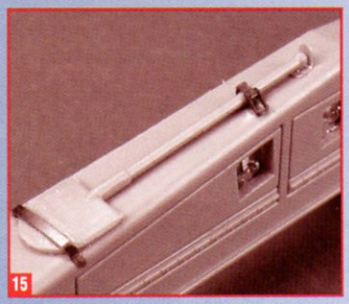
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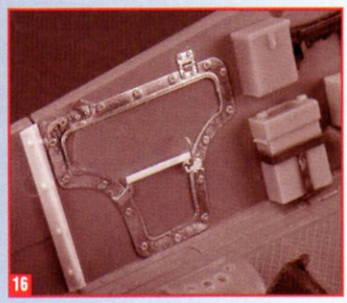
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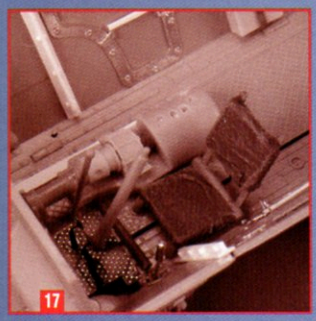
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market company needs to address this oversight. Eduard alone provides foot pedals, tread plate for the driver areas, front and rear instrument panels with acetate gauges and a vent panel for the firewall. A smattering of boxes and equipment was positioned based on better photos of other vehicles. The beams that join the front and rear hull halves - just to the rear of the side doors - was made by splitting fine Evergreen channel in half, then adding punched plastic rivets.

Chapter four: Pat goes to school

The upper hull has been treated well by Aber, who provides some very cool details for the four vision ports. Each one is a perfect fit and is accompanied by hinges for the armored covers. I opted to raise the front and rear covers and leave the two side covers closed. A towing pintle was added to the front bumper; it is seen in several wartime photos. The pin is copper wire with a punched foil base and a whiff of Aber chain. Eduard provides a lovely spare tire bracket and both Eduard and Aber offer replacements for the eight stowage hooks that decorate the upper hull exterior. Both companies provide comprehensive parts for opening up the engine vents on the rear deck. I decided to pass for now until I can scratch build that 12-cylinder diesel engine...

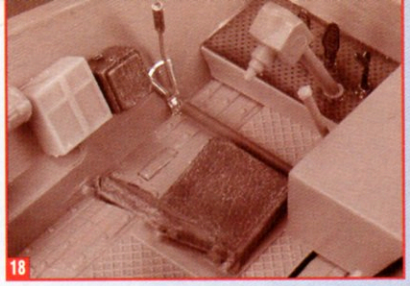
Fender for yourself

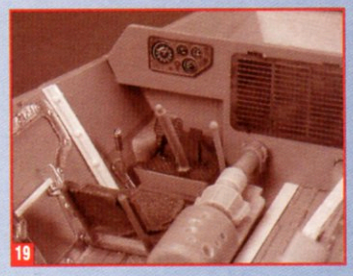
The large side fenders can't be attached until the upper and lower hull is sealed, so tricking out the fenders is a party. Each one stands alone and is a festival of detail. A mix of Eduard and Aber tool and jerrycan brackets was used. The jack, fire extinguishers and bolt cutters came from Tamiya's Panzer IV On-Vehicle Equipment Set (#35185). The six jerry cans and two headlights came from Tamiya's German Fuel Drum Set (#35186) and are a marvel. The horn is courtesy of Elefant (#35466), along with the four mudguard poles (#35408) with based punched from lead foil. Aber and Elefant both address the lock panels on the eight stowage bins. I went with Aber's, which are quite intricate but which provide a more properly recessed look to the panels. Either case requires carefully cutting out the plastic parts; go carefully, young Jedi's and use a fresh blade. The first bin on the left side was completely opened up and the interior walls filled in with sheet plastic. The two middle bins on each side also require sheet plastic fills, as they have no bottoms. Due to this arrangement, the limited space behind the wheels and the reference photos, I have begun to think that the 234 escape doors swung inward. When finished, the two fenders boasted 187 detail parts.

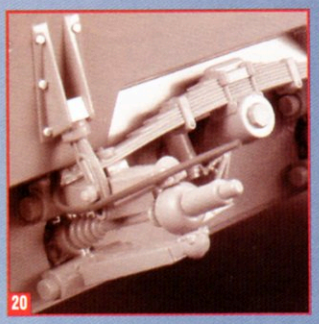
To the top

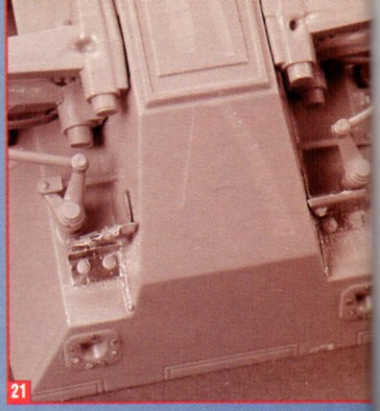
The 2cm KwK 38 barrel in the kit was chopped off the gun and the Jordi Rubio version (#TG-22) installed. This is not an easy fit and requires a lot of carving and test fitting to get it straight. Darlington has some splendid wartime photos of the turret by itself and plentiful details are evident. Again, both Aber and Eduard provide ample

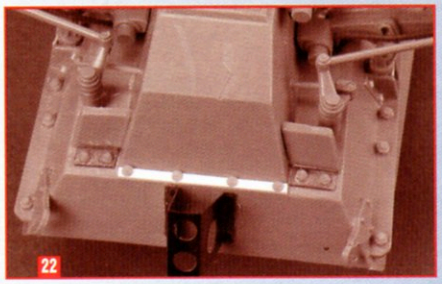
1, 2. Rear left taillight made from sheet plastic, Aber bracket, and Eduard front plates. 3, 4. Front left stowage compartment door. Aber's auxiliary set for the 234 provides all eight stowage doors along with the locks. They're beautiful, man. 5. Nicely done resin wheels from MR. Spare plus one of the eight is shown. These require the Italeri hubs and valve stems were added from brass wire. 6. The dolled-up turret—a model in itself. Aber's anti-grenade screens are easy to see here. 7. Eduard thoughtfully provides seat belts for the commander and gunner. 8. Radio and speaker box from the spares collection. Also visible is the MG ammo bag, which in this instance serves as a collection point for the spent ammo belt. A watch gear made a fine replacement for the hand wheel. 9. The reworked sighting mechanism made from aluminum tubing, Aber details, and spares. Aber's front and rear 2cm sights are easily seen here. Prepare for Optivisor use when installing. Also seen is Aber's detail for the ammo clip. 10. Opening up the bins requires rebuilding the interior. Tamiya's extinguisher rides along on top. 11. Tamiya jack and jerry cans, mounted up with Eduard brackets. 12. There's a whole party on the front edge of the fenders; Elefant horn and width pole, dressed up Tamiya headlight, and a whole slew of tiny parts. 13. Ditto for the right fender. Aber's headlight bracket gets a little sheet plastic and screws made with a punch. Those are Tamiya's jerry cans, from set 35186. 14. The Aber lock mechanisms are fantastic, as they form the properly recessed effect for the locks. Obviously, they require carving out the panels from the Italeri kit. 15. Shovel, anyone? 16. Aber's 234 auxiliary set also provides the interior door frame. Cutting some fine Evergreen channel beam in half, then adding the bolt heads made the wall braces. 17. Eduard does a nice job on the rear driver's compartment.

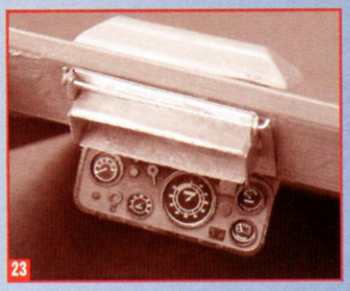


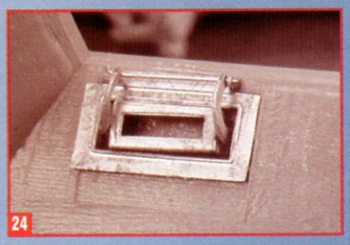


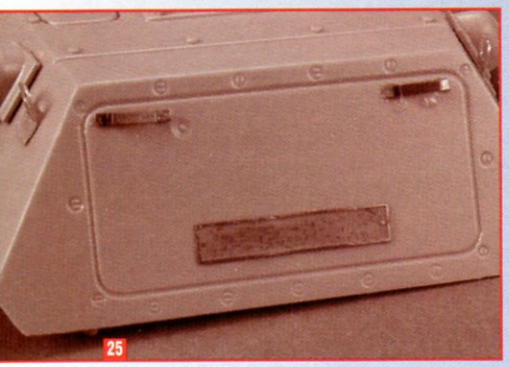




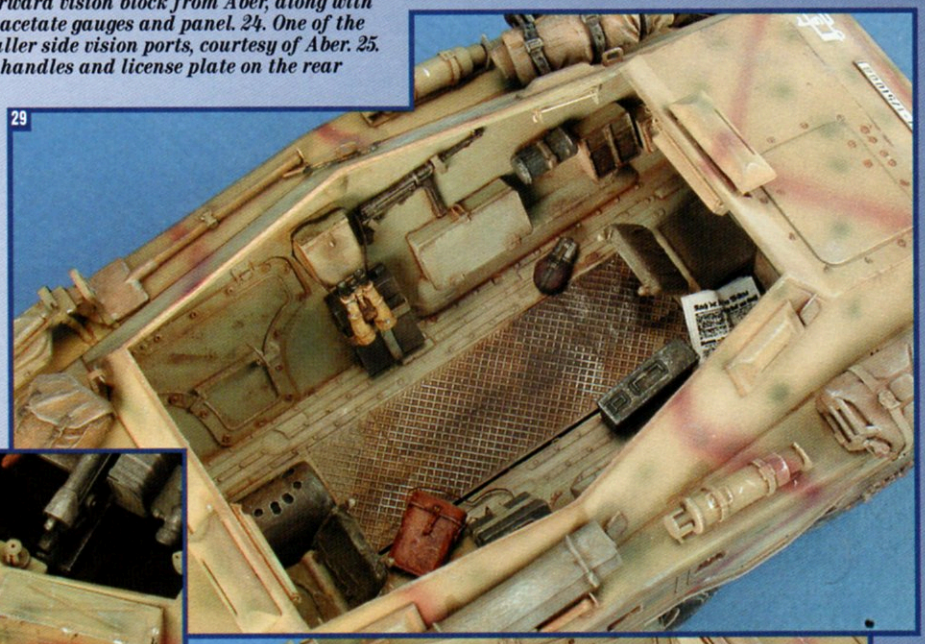


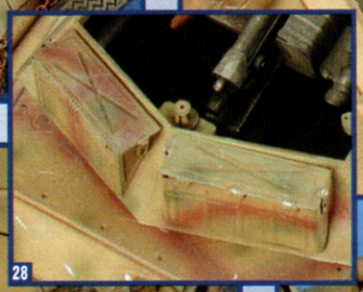






The seat with wrinkled tissue was recovered from the parts box. The Darlington reference clearly shows the transmission in this area, which is completely absent in the Italeri kit. 18. The forward driver's compartment with boxes and fixins' from the spares box. 19. Another shot of the rear driver area, with Eduard fire wall details and the scratch built transmission housing. 20. Each of the eight axle assemblies received a hydraulic line, bolts for the mount and a wee bit of plastic sheet to fill out the bracket. 21. Small armor plates protected the front suspension; a little damage was added to one. Note also the bolt heads added to the front bumper mounts. 22. The flanges that run horizontally above the rear suspension leave plenty of room for work. Bolt heads were added to the top and bottom, along with details on the rear end and the spare tire mount from Eduard. 23. The forward vision block from Aber, along with Eduard's acetate gauges and panel. 24. One of the three smaller side vision ports, courtesy of Aber. 25. Eduard's handles and license plate on the rear engine access panel. 26. The left rear stowage bin of the finished kit. Say howdy to a whole evening of photo-etch fun. 27. The finished front end. A towing pintle has been added to front bumper, made from spare parts and Aber chain. This arrangement appears sporadically in wartime photos, and might have been a field modification. 28. Eduard's stowage bins were attached to the rear of the turret. The 2cm round deflector from Aber is also seen on the right side of the gun. 29-32. Available interior photos of the 234 are all museum pieces, and stripped down; so the placement of spare vision blocks, MP40, stowage compartments, and 2cm ammo are all based on the research of other vehicles. In my best guess, it looked something like this. 33. I just HAD to show one of the stowage bins open. And don't forget—a stowage bin's not a stowage bin without stowage. 34. Reflections of love... Here, dollhouse mirror material has been subjected to the punch and die treatment. 35. The left rear fender with the appropriate stowage.





36. A view into the turret. The grenade screens are from Aber with supports made from plastic. The antenna mount is from GREIF, but the antenna has been pulled for the photograph.

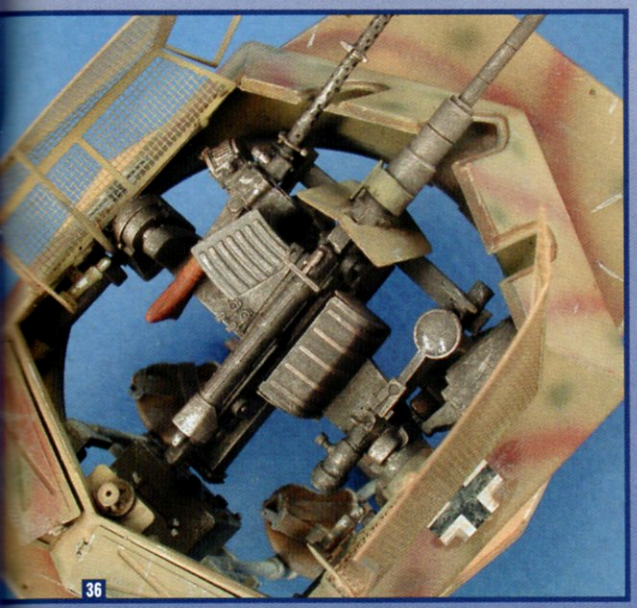
fixins for the 2cm gun, including the brass deflector, shield, magazine details and sight. A new sight tube was made with Minimeca tubing. The main elevating wheel was replaced with a watch gear. The MG34 is from Dragon and features Aber's brass deflector plus a resin MG ammo bag as a brass collector. The twin stowage boxes on the rear of the turret are the Eduard version. The radio and speaker box are spares. Eduard thoughtfully provides seat belts for the commander and gunner, which can be folded into any configuration the user desires. Aber's anti-grenade screens were selected and feature intricate hinges and brackets as well as integral screens. Braces were added to the screens from plastic rod. An antenna mount from GREIF (#005) was added in lieu of the kit part and Minimeca stainless steel wire forms the antenna.

Paint your spahwagen

There were surprisingly few subassemblies when I reached the airbrush station: upper and lower hull, two fenders, wheels, turret plate and the turret itself. The taillight and two mufflers were left off until the fenders could be joined to the hull. The whole shootin' match was sprayed with Krylon White Primer right out of the can, then airbrushed with a 50/50 mix of Tamiya Flat Brown and Flat Black. The interior was next sprayed with Polly S German RLM 84 Sky Green (a very cool color) and the exterior with Tamiya Dark Yellow. 1944 camo colors were applied using Tamiya Dark Green and Red Brown. Detail painting of the interior was completed first so the remainder of the vehicle could be assembled. It was at this point that I discovered a lot of whacking of the axles is necessary to get the Tank Workshop wheels under the fenders. All areas were given a wash of artist oil Burnt Sienna and Raw Umber. A heavy mix of rust-colored enamel was applied to the mufflers and fine sand was quickly sprinkled over the surface creating an instant rust texture. Hudson & Allen chain was wrapped around the spare tire bracket and tow hooks. Dry transfers from VP were combined with kit decals to put this vehicle with the 23rd Panzer Division operating in Poland and Hungary in 1944.

Italeri kit plus 599 detail parts—a new record. Coming next issue: the 234/2.

—Joe Porter



MMiR RECCE

Italeri Sdkfz. 234/1. Kit number 294. One of a kind, finally released a couple of years back to round out the 234 family. Retail price $20.00.

Eduard Model Accessories Sdkfz. 234/1 Detail Set. Set number 35234 (interesting part number, don't you think?). Designed specifically for the Italeri kit, it's packed with unique goodies including the acetate instrument panels and firewall vent. Retail price $19.99.

Aber Heavy Armoured Car Sdkfz. 234/1 Update Set. Set number 35030. Designed specifically for the Italeri kit, it's an all-out assault. The vision blocks and engine deck vent are especially attractive and there's a gazillion parts here. Retail price $24.99.

Aber Side Bin Doors & Additional Parts for Sdkfz. 234. Set number 35A30. A smaller set of etched goodies for the whole 234 series. Includes interior door frames plus stowage bin doors and locks. Retail price $13.99.

The Tank Workshop Sdkfz. 234/2 Puma Wheels. Item number 2057. Eight resin wheels plus a spare, featuring different tread pattern than the kit wheels. Retail price $9.00

Collectors interested in purchasing this model can contact jporter@cosmicbovine.com

References

Schwerer Panzerspahwagen (Sdkfz. 234). Darlington Productions, Museum Ordnance Special No. 24, 1998. A wonderful, well-priced reference with a comprehensive development history and excellent detail photos of surviving vehicles. Probably the only place you'll find the shots you need.

Puma & Other German Heavy Reconnaissance Vehicles. Schiffer Publishing, 1994. An affordable all in one on the 234 family, with wartime photos plus some interesting survivors.

German Armoured Cars & Reconnaissance Half-Tracks 1939-45. Osprey Vanguard Series #29, 1999. Gives brief coverage of a large number of vehicles, but the centerfold artwork of a 234/4 is a knockout.

Encyclopedia of German Tanks of World War Two. Arms and Armour Press, 1993. Once again, the definitive reference rocks on. The 234 series begins on page 202.

The Model Citizen

Welcome to the second edition of The Model Citizen—all figures, all the time. This section focuses on various aspects of scale figures, from uniform development to painting techniques. And since we're pretty much an armor mag, we decided it would be fitting to outline the black SS and Wehrmacht panzer uniforms. Uniform evolution is every bit as important as the development

Waffen-SS

SS tankers initially wore the Army panzer uniform, and late war supply problems again saw the SS in Army issue. The SS version introduced in 1940 differed slightly with smaller lapels and a straight vertical rather than slanting closure of the front, and no rear vertical seam. The Feldjacke (jacket) and Feldhose (trousers) had buttons made of horn or synthetic material, not metal. Trousers featured a small 'fob' pocket to the right of the groin, one or two hip pockets with button flaps, and two front pockets with forward-facing flaps. This uniform was normally worn with gray, black, or brown shirt with black tie, or sweater.

Insignia: SS panzer jackets have the SS eagle on the left bicep. On the SS eagle, the center of the wingtip extends farther than the top edge of the wing. Collar insignia is SS runes (Sigrunen) on the right, rank on the left (the same as other SS uniforms). These collar patches are smaller and wider than the Wehrmacht version. Only officers wore silver piping around the collar insignia patches, and around the edge of the collar. Thus, enlisted ranks had no piping whatsoever on the collar. (There were rare exceptions very early in the war but these were quickly standardized.) Shoulder epaulettes were the same as other SS uniforms, and were edged with rose pink Waffenfarbe piping for armor units. SS tankers wore their unit's cuff title around the left forearm of this uniform. Campaign cuff titles (Afrika Korps, Kreta, etc.) were worn per regulation.

Also of importance is the SS belt buckle. Enlisted ranks wore a rectangular buckle with SS motif and an eagle above. The officer's buckle was round with the same design; however, it had a tendency to pop open. Thus our man wears an open-faced buckle, a common substitute. (Note that 3rd SS Pz.Div. Totenkopf wore the Death's head on the right collar patch in place of the SS runes. There were also a number of foreign divisions which wore distinctive unit insignia in place of the Sigrunen.)

Full-length marching boots (Marschstiefel) were replaced in 1941 by lace-up ankle boots, though many tankers continued wearing the full-length version, as worn by our figure.

Headgear: Quite a variety of headgear was worn with the tanker uniform, and each has their own history. Here's an overview.

Schutzmütze - Large black beret initially worn by the panzertruppen. Highly unpopular and impractical.

Feldmütze - Soft sidecap, the style worn by U.S. forces today. Panzer troops began wearing the field gray version from their service uniforms as early as the Polish campaign. The black Feldmütze for tankers, which replaced the large beret, was introduced in March 1940.

Einheitsfeldmütze - Black field cap in the style of a baseball cap, introduced in mid-1943. Piping around the crown and turned-up flap was prescribed for officers but not always worn.

All three headgear listed above used SS insignia; Death's head at front center, with SS eagle above.

Schirmmütze - The popular field gray peaked cap worn by our figure, taken from the service uniform. It normally had braided cords above the brim, which were often removed so that the cap resembled the older 'crusher cap' of the mid-1930's. The crusher cap had a smaller peak. The SS Schirmmütze had a black cloth band with Death's head centered above the peak, and SS eagle (embroidered or metal) above. All SS officers were ordered to use only white piping on this hat as of December 1939, but distinctive branch Waffenfarbe continued to be worn in practice throughout the war. Thus our figure wears the rose pink piping of the panzertruppen. Note the three lengths of piping; above and below the cloth band, and circling the crown.

The Figure: The C.D. Yoshi figure depicts SS-Sturmbannführer (Major) Max Wünshe. His rank is indicated by the four pips on his collar. The sleeve eagle is missing off the figure, and had to be hand painted. This tanker wears the Knight's Cross with Oakleaves at his throat; Iron Cross 2nd Class ribbon on his lapel; and on his left breast, the Iron Cross 1st Class (top), War Merit Cross (bottom), Infantry Assault Badge (his right), and Tank Engagement Badge (his left). He wears the 'Adolf Hitler' cuff title used by both LAH and Hitlerjugend, taken from the VP decal set. He wears officer's gray doe skin gloves.

Thus the common SS distinctions are these; eagle on the left sleeve; rank and runes on collar; cuff title on left forearm; eagle and skull on headgear.

SS-Sturmbannführer Max Wünshe, 12th SS Hitlerjugend, produced by C.D. Yoshi (#G-02).

There are dozens, even hundreds, of cases of non-standard tanker's uniforms, so there are always exceptions. The above guidelines, however, will cover 99% of your basic black-clad figures. Most importantly, watch those eagles; left sleeve for SS, and right breast for Wehrmacht. And we haven't even got to the denim, reed green, and camouflage panzer uniforms yet ...

Sonderbekleidung der Deutschen Panzertruppen
(Special Uniform for German Armored Troops)

of the vehicles themselves; just as you check your armor markings and colors, you gotta know the uniforms your crews are wearing. There are several commonalities between the black SS and Wehrmacht panzer uniforms, but there are also distinct and crucial differences. This abbreviated guide is simply to help you tell the difference - and to get your truppen properly painted. Check it out.

WEHRMACHT

Wehrmacht Tanker Looking at Map, produced by Warriors (#35322). Cap removed and used on Hornet head. Left arm and left hand replaced.

Army panzer uniforms had longer lapels and a slanting front closure plus a rear vertical seam. Compare the lapels of the two figures above. It's a minor issue as SS initially wore the Army-issue uniform, and most manufacturers ignore the difference anyway. The Feldjacke (jacket) and Feldhose (trousers) had buttons made of horn or synthetic material, not metal. Trousers featured a small 'fob' pocket to the right of the groin, one or two hip pockets with button flaps, and two front pockets with forward-facing flaps. This uniform was normally worn with a gray, black, or brown shirt with black tie, or sweater.

Insignia: Wehrmacht panzer uniforms have the National Emblem eagle on the right breast of the jacket. On this eagle, the wingtip angles inward from top to bottom. Collar insignia for all ranks is Totenkopf skull on both sides edged in rose pink Waffenfarbe piping. These collar patches are longer and more narrow than their SS counterparts. Pink piping was worn around the edge of the collar by all ranks. This collar piping was discontinued in 1942, but continued to be worn in practice throughout the war. Shoulder epaulettes were the same as other uniforms, also edged with pink piping. For lower ranks, the epaulettes were in black cloth rather than the dark blue-green used on the field uniform. Only Panzer-Division Grossdeutschland wore a cuff title, on the right forearm. Campaign cuff titles (Afrika Korps, Kreta, etc.) were worn per regulation.

Also of importance is the Wehrmacht belt buckle. All ranks wore a rectangular buckle with circular design in the center. There are no eagle's wings above the circle, which helps distinguish Wehrmacht buckles from SS even in 1/35th scale. Like the SS, many Wehrmacht officers opted for an open-faced buckle. (Also of note is that general officers commonly used rank patches on the collar of this uniform, rather than the twin skulls.)

Full-length marching boots were replaced in 1941 by lace-up ankle boots (Schnürschuhe) as worn by our figure, though many tankers continued wearing the full-length version.

Headgear: Quite a variety of headgear was worn with the tanker uniform, and each has their own history. Here's an overview.

Schutzmütze - Large black beret initially worn by the panzertruppen. Highly unpopular and impractical.

Feldmütze - Soft sidecap, the style worn by U.S. forces today. Panzer troops began wearing the field gray version from their service uniforms as early as the Polish campaign. The black version for tankers, which replaced the large beret, was introduced in March 1940.

Einheitsfeldmütze - Black field cap in the style of a baseball cap, introduced in mid-1943. Piping around the crown and turned-up flap was was prescribed for officers but not always worn.

All three headgear listed above bore the Wehrmacht eagle on the upper front. The Schutzmütze bore the national Reichskokade ('bullseye', with red center, white ring, and black outer ring) surrounded by embroidered oak leaves. The Feldmütze and Einheitsfeldmütze typically bore the national cockade without the oak leaves.

Schirmmütze - The popular field gray peaked cap worn by our figure, taken from the service uniform. It normally had braided cords above the brim, which were often removed so that the cap resembled the older 'crusher cap' of the mid-1930's. The crusher cap had a smaller peak. The Wehrmacht Schirmmütze had a dark blue-green cloth band with Reichskokade and white metal oak leaves centered above the peak, and Wehrmacht eagle (cloth or metal) above. Distinctive branch Waffenfarbe was used on this hat. Thus our figure wears the rose pink piping of the panzertruppen. Note the three lengths of piping; above and below the cloth band, and circling the crown.

The Figure: The modifed Warriors figure depicts a Hauptmann (Captain) of an unidentified unit. His rank is indicated by the two pips on his epaulettes. This tanker wears the Iron Cross 2nd Class ribbon on his lapel; and on his left breast, the Close Combat Clasp (top), Tank Engagement Badge (his right), and Wound Badge (his left). Unusually, he has his trousers bloused inside heavy socks.

Thus the common Wehrmacht distinctions are these; eagle on right breast; matching skulls on collar; eagle and national cockade on headgear; no cuff title other than GD soldiers.

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